



Reviewed 3/10/2020

Documented Categorical Exclusion (DCE) for
I-40 and Douglas Boulevard Bridge and Interchange Improvement
Oklahoma County
Division IV
J2-8992(004)SS, JP#28992(04)

Existing Conditions and Purpose and Need for the Action

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma.

The Douglas Boulevard bridge over I-40 (NBI #15573) is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft. wide sidewalks on each side of the bridge. The existing Douglas Boulevard bridge has a clear roadway width of 80 ft. and a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16 ft. 9 in. (eastbound) and 16 ft. 4 in. (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 48,000 vpd by the year 2045.

I-40 underneath Douglas Boulevard is a four-lane divided urban interstate with a 40-ft. wide grass median, 12-ft. wide driving lanes, 3-ft. wide inside shoulders, and 10-ft. wide outside shoulders. The current AADT on I-40 is 54,600 vpd, and is projected to increase to 84,600 vpd by the year 2045. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40. The number of collisions at this location is higher than th locations.

Mention where this is regards to I-40 Douglas

The existing Engle Road bridge over I-40 (NBI #15560) over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists, and the property is now owned by Tinker Air Force Base and Oklahoma County. Therefore, Engle Road bridge is closed to traffic and not in use.

The existing Industrial Boulevard bridge over I-40 (NBI #15559) is approximately 0.5 miles west of Douglas Boulevard, has a clear roadway width of 48 ft., and has a sufficiency rating of 67.8. The bridge is four lanes wide, including three through lanes and one left-turn lane. The bridge's vertical clearance for I-40 is posted as 18 ft. (eastbound) and 16 ft. 6 in. (westbound). The Industrial Road bridge over I-40 provides access to the Hruskocy Gate to Tinker Air Force Base.

This project will tie to an adjacent project east for I-40 improve ctaw Road interchange.

Mention the Town Center Drive as the traffic will be using that and Douglas Blvd ramps after the removal the Inudtrial Blvd ramps

The purpose of this project is to correct the functionally obsolete and improve safety while accommodating future traffic volumes.



The project is included in ODOT’s 8-Year Construction Work Plan FFY 2018 through FFY 2025, as well as the Association of Central Oklahoma Government (ACOG) Oklahoma City Area Regional Transportation Study (OCARTS) Transportation Improvement Program for FFY 2017 – 2020.

Prior Planning and Alternatives Considered

Three (3) interchange alternatives were identified for consideration:

- Alternative 1 - Single Point Urban Interchange (SPUI). A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing a single set of traffic signals. The SPUI accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed. Alternative 1 would require less than one acre of right-of-way to be acquired from Oklahoma County in the southwest quadrant.

- Alternative 2 - Tight Urban Diamond Interchange. A Tight Urban Diamond Interchange is an interchange that includes all four interchange ramps, northbound Douglas Boulevard traffic lane facility. Through the interchange, turn lanes, and right-turn lanes where ramp flyover, the northbound to westbound exit ramp lanes will also be constructed will not be re-constructed. Alternative 2 will be acquired from Oklahoma County in the southwest quadrant.

- Alternative 3 - Cloverleaf Interchange. A Cloverleaf Interchange will accommodate widening I-40 to a six-lane facility. Through the interchange, two additional lanes for loop ramp weaving, two additional lanes for left turning traffic, and entrance and exit ramp lanes will also be constructed along I-40. Alternative 3 will be acquired from Oklahoma County in the southwest quadrant.

All three alternatives included the removal and reconstruction of the Industrial Boulevard collector-distributor roads. An Access Justification Report has been prepared for each alternative and is included as an attachment.

Public Involvement & Agency Solicitation

Notifications of specialist field studies were provided to all area landowners.

A Public Meeting was held to present the project information on January 17, 2017, 6:00 p.m., in the Raider Room of the Bill Atkinson Student Center at Rose State College, Midwest City, Oklahoma. At that meeting, the three alternatives described previously were presented, based on the results of an

Aren't the eastbound on ramp and the westbound off ramp going to be removed or reconstructed? The AJR says the ramps will be removed. We showed the public the ramp removals but this doesn't mention anything about it. The exhibit of Alternative 1 we sent to public as preferred alignment does not show elimination of the ramps either. We don't have the preferred alignment on our web page either



engineering design study. In addition, 20 agency solicitation letters were sent to federal and state resource agencies (see agency solicitation list in attached Public Involvement section). ODOT received 10 comments from state and federal agencies and 13 comments from the public. Agency comments expressed either no concerns with the project or recommendations for compliance with agency protocols. More than half of the written public comments received which expressed support for an alternative supported Alternative 1. Alternative 2 received the next most support. Other public comments addressed traffic operations at Street/Douglas Boulevard intersection, pedestrian accommodations, and engineering design studies. Based on these comments and the completed Preferred Alternative, the Single Point Urban Interchange, as the safety, accommodates large volumes of traffic, and provides greater mobility for trucks due to long, gradual turns. Alternative 2 was eliminated due to high and less efficient traffic operations and turning traffic mobility. Alternative 1 provides less than desirable interchange geometry, fewer safety improvements, and fewer pedestrian facilities. ODOT informed the public of the Preferred Alternative selection on April 11, 2017 to all parties on the project mailing list and by posting a public notice on the ODOT website.

reconstructed to a six lane facility and lowered to meet the minimum vertical clearance of 16 ft 9 inches under the Douglas Boulevard bridge. I 40 will have 10 ft wide outside shoulder and 33 ft paved median with concrete barriers. The bridge on Douglas Boulevard will be replaced

You need to mention removing the Industrial Blvd ramps and the Industrial Blvd Bridge will be replaced. Is it part of this project?

What is the proposed typical for Douglas Blvd? Are there sidewalks? What is the width of the bridge? The proposed description is incomplete.

The project does not have any significant impacts.

Description of Proposed Alternative

The Preferred Alternative is a diamond interchange with Douglas Boulevard traffic along with traffic signals. The Single Point Urban Interchange will converge with traffic volume impacts. I-40 will be improved to a six-lane facility. Through lanes will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed. Alternative 1 would require less than one acre of right-of-way to be acquired from Oklahoma County in the southwest quadrant. No relocations are anticipated for the Preferred Alternative. An Access Justification Report has been prepared as a separate document and the text and summary is included as an attachment.

Social, Economic and Environmental Impacts & Agency Coordination

Right-of-Way and Relocations

The project involves acquisition of right-of-way. However, the acquisition does not involve any residential or commercial relocations nor involve property in which another Federal Agency or Federally Recognized Tribe has ownership, oversight or any other encumbrance.

Environmental Justice

U.S. Census data were used to evaluate the NEPA study area for high concentrations of minority and low-income populations. For purposes of this demographic analysis, the census tracts, census block groups, and census blocks which contain the proposed project were assessed. Eight census blocks associated with the 2010 Census are relevant for minority analysis, and four census block groups associated with the 2012-2016 ACS 5-Year Estimates are relevant for low-income population analysis. The eight census blocks report a minority percentage ranging from 0% to 26%, which is lower than the reported minority percentages for Midwest City, Oklahoma City, Oklahoma County, and the state of Oklahoma. The



census block groups report median household income in the past 12 months ranging from \$32,813 to \$195,441, which is above the \$25,100 DHHS poverty guideline for a family of four for 2018. Therefore, no minority or low-income populations have been identified that would cause disproportionately high and adverse impacts by the proposed project. In accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A, no further environmental justice analysis is required.

Based upon the *2012-2016 ACS 5-Year Estimates*, less than 5% and less than 1,000 persons residing in the census blocks within the NEPA study area speak English less than “very well.” Therefore, no LEP language assistance efforts were required, per ODOT’s Title VI Plan and E.O. 13166.

Cultural Resources

On behalf of the Federal Highway Administration (FHWA), ODOT has consulted with the Oklahoma State Historic Preservation Office (SHPO), the Oklahoma Archaeological Survey, and appropriate Native American tribes regarding the impacts of this undertaking on historic properties. No historic properties are present in the project area of potential effect (APE).

Section 4(f) and Section 6(f) Involvement

The action does not involve the use of properties protected by Section 4(f) of the Department of Transportation Act (49 U.S.C. 303).

Waters and Wetlands

The action involves work in unnamed potentially jurisdictional waterways. The proposed construction activities will be evaluated to ensure that the appropriate Clean Water Act Section 404 permit application is made.

Threatened & Endangered Species and Migratory Birds

A biological field review was performed for the referenced project. ODOT has determined that the project, as proposed, will have no effect on the federally-listed Interior Least Tern, Whooping Crane Piping Plover, and Red Knot. The U.S. Fish and Wildlife Service (USFWS) has concurred with the department’s findings.

The project as proposed could adversely affect Migratory Birds, protected by the Migratory Bird Treaty Act (MBA), if construction activities occur during the nesting season of this species. A plan note requiring avoidance of demolition or construction of any existing structures with migratory bird use during the nesting season will be added to the final construction plans.

Floodplains

The project is not located in a regulatory floodway that will require a flood plain revision as determined by the appropriate state or local authority.

Farmlands

The action occurs mostly within existing right-of-way and in an urban area. Hence, the project will not affect any farmlands.



Hazardous Waste

There are no known hazardous materials sites or previous land uses with potential for hazardous material remains within the proposed action area.

Changes to Access or Access Control

Full access to/from I-40 and Douglas Boulevard will remain, but access control will change from free flow to a signal control on Douglas Boulevard. The Engle Road bridge, which is not in use, will be removed and will not be replaced. An Access Justification Report has been prepared as a separate document and the text and summary is included as an attachment.

Temporary Construction Impacts

Both roads will remain open to through traffic, and access will be provided to local property owners at all times during construction. Closure of ramps from time to time will be necessary during construction. ODOT will notify the public in advance of ramp closures.

Noise

The analysis had utilized the FHWA Traffic Noise Model version 2.5 in accordance with FHWA 23 CFR 772 and complies with the ODOT Noise Policy dated July 13, 2011. For the purposes of validating the noise model, a precision sound level meter was utilized in conducting field measurements along the existing I-40 which proved successful. The land use within the project limits consists primarily of commercial and industrial mix; however, two medical facilities, one Recreational Vehicle (RV) Park, one mobile home park and scattered residences exist. Thirty-one (31) model receptor locations representing a total of 67 receptors were analyzed. For the existing (2014) condition, three (3) residential and twenty-one (21) RV Park receptors approach, meet or exceed the 67 dB(A) LEQ(h) for NAC Activity Categories B and C, respectively. For the future condition (design year 2045), seven (7) residential and two (2) RV Park receptors approach, meet or exceed the 67 dB(A) LEQ (h) for NAC Activity Categories B and C. No commercial receptors approach the 72 dB(A) LEQ (h) for NAC Activity Category E. An interior analysis was conducted for the St. Anthony's HealthPlex and Animal Medical facility; these receptors were evaluated as NAC Activity Category D in which no existing or future noise impacts occur. In addition, the affected receptors are anticipated to experience an increase in future noise levels ranging from -2.0 to 4.0 dB, and thus, no substantial increase (15 dB) over the current condition when considering noise impact determination.

Noise mitigation in the form of a free-standing noise wall was considered for the impacted receptors. Seven (7) of the residential receptors located at the south end of the project limits have direct driveway access onto Douglas Boulevard. Without access control, the gap that would be required for the driveway connections would make noise abatement measures ineffective and, therefore, noise mitigation would not prove feasible. The other two (2) impacted receptors are located within the Eastland Hills RV Park. A noise barrier was modeled inside the highway right-of-way line along the access road to the RV Park at various heights. Based on the barrier analysis of a noise wall consisting of 608 feet in length at a maximum height of 22-feet was not able to achieve the desired 5.0 to 7.0 dB(A) noise reduction; therefore, noise mitigation is not feasible. Based on the inability of this noise wall not able to attain the acceptable reduction of future noise levels for these receptors, no noise barrier is recommended for design.



FAA Permitting

The action may require notifying the Federal Aviation Administration (FAA) of proposed construction via FAA Form 7460-1 prior to construction, in accordance with 14 CFR 77.13 – 77.17, due to the location of Tinker Air Force Base (FAA Code TIK) within four (4) miles of this project.

Summary of Commitments

1. The action may involve work in potentially jurisdictional waters. The Section 404 permit application form will be submitted by the Designer through Project Management Division to Environmental Programs Division at the time of right-of-way submittal for evaluation and determination of the appropriate Clean Water Act Section 404 permit application for the project.
2. The following plan notes requiring construction season restrictions for migratory birds will be added to the final project plans under “Environmental Mitigation Notes” per policy Directive C-201-2D(2): **Migratory birds are protected by the federal Migratory Bird Treaty Act. Many birds commonly use bridges and culverts for nesting. The nesting season for most bird species extends from March 1 to August 31. The project was surveyed for migratory bird nests in January 2017. Although no nests were observed, the survey is valid only until the start of the 2017 nesting season (beginning March 1). The Resident Engineer shall contact the ODOT Biologist at 405-521-2515 if any bird use of the existing structures is observed. If birds are observed, then extension or demolition of the existing bridges and culverts shall be conducted between September 1 and February 28 (when migratory bird nests are not occupied).**
3. The following airports are located within 4 miles of this project. This action may require notifying the Federal Aviation Administration (FAA) of proposed construction via FAA Form 7460-1 prior to construction:
 - Tinker Air Force Base (FAA Code TIK)

Conclusions

The Oklahoma Department of Transportation (ODOT) has completed the environmental analysis and review of the referenced project. ODOT has determined that this project does not individually or cumulatively have a significant impact on the environment as defined by the National Environmental Policy Act (NEPA), or involve unusual circumstances as defined in 23 CFR 771.117(b), and is therefore excluded from the requirements to prepare an Environmental Assessment or Environmental Impact Statement. As provided by the 2011 Federal Highway Administration (FHWA)/ODOT Programmatic Agreement Process of Categorical Exclusions, FHWA has previously determined that processing this action as a Documented Categorical Exclusions (DCE) is appropriate. Based on consideration of prior planning studies, appropriate agency solicitation, thorough environmental review, and public coordination, ODOT has determined that this action results in no significant impacts to the human and natural environment, involves no public controversy on environmental grounds, and no inconsistency with any Federal, State or local laws, regulations, and administrative determinations relating to the environment. FHWA concurrence with this finding is requested.

All documentation, analyses, and agency coordination regarding this Categorical Exclusion are contained in a support appendix maintained in the project file at the Oklahoma Department of Transportation, Environmental Programs Division.



Preparer/Reviewer Signatures

<i>Diane Abernathy</i>	03/02/20
Environmental Consultant Project Manager	Date
Triad Design Group	
Environmental Consultant Firm Name	
County Commissioner or City Manager	Date
ODOT Environmental Project Manager	Date
Assistant Environmental Programs Division Engineer	Date
Environmental Programs Division Engineer	Date

Concurrence that this project qualifies for a Documented Categorical Exclusion:

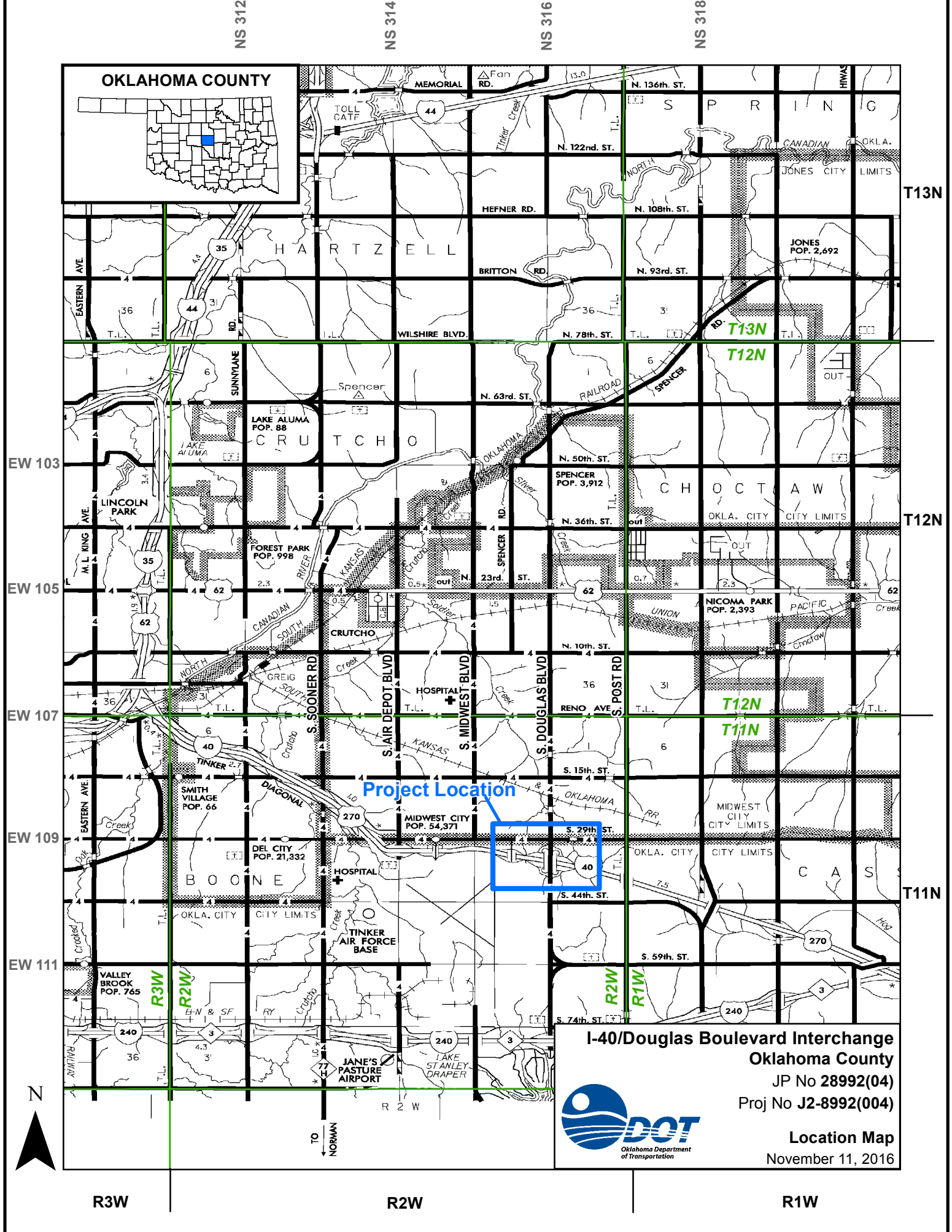
Environmental Programs Manager, FHWA	Date

Attachments:

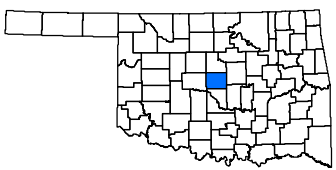
- Memos with Plan Notes
- Location Map
- Plans/Study Footprint
- Studies
- DCE Justification Document
- AJR Text and Summary

Distribution List

X	Project Management Division
X	Roadway Design Division
X	Bridge Division
X	Traffic Division
X	Local Government Division
	Special Projects
	Safe Routes to School Coordinator
X	Field Division Engineer
X	Right-of-Way Division
X	Office Engineer Division
X	FHWA



OKLAHOMA COUNTY



Project Location

I-40/Douglas Boulevard Interchange
Oklahoma County
 JP No 28992(04)
 Proj No J2-8992(004)



Location Map
 November 11, 2016

R3W

R2W

R1W



PLANS OR FOOTPRINTS

FOR SURVEY CONTROL DATA,
SEE SURVEY DATA SHEETS

STATE OF OKLAHOMA DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED STATE HIGHWAY FEDERAL AID PROJECT NO. J2-8992(004)SS GRADE, DRAIN, BRIDGE & SURFACE I-40 & DOUGLAS BLVD. INTERCHANGE OKLAHOMA COUNTY

CONTROL SECTION NO. 40-55-68
STATE JOB NO. 28992(04)
BRIDGE B LOCATION NO. 5568-0634X EXIST. NBI NO. 15573 NEW NBI NO. 32125

Did these plans change? They are from Sep 2018.

SEE SHEET 2 FOR INDEX OF SHEETS AND STANDARDS

Include geomteric layout sheet

DESIGN DATA I-40	
ADT 20 17	= 55,595
ADT 20 45	= 84,580
DHV (1-WAY)	= 5,244
K (DHV/ADT)	= 10%
D	= 62%
T (% DHV)	= 13%
T (% ADT)	= 15%
T3 (% ADT)	= 12%
V	= 60 MPH
20YR FLEX. ESALS	= 58.3 M

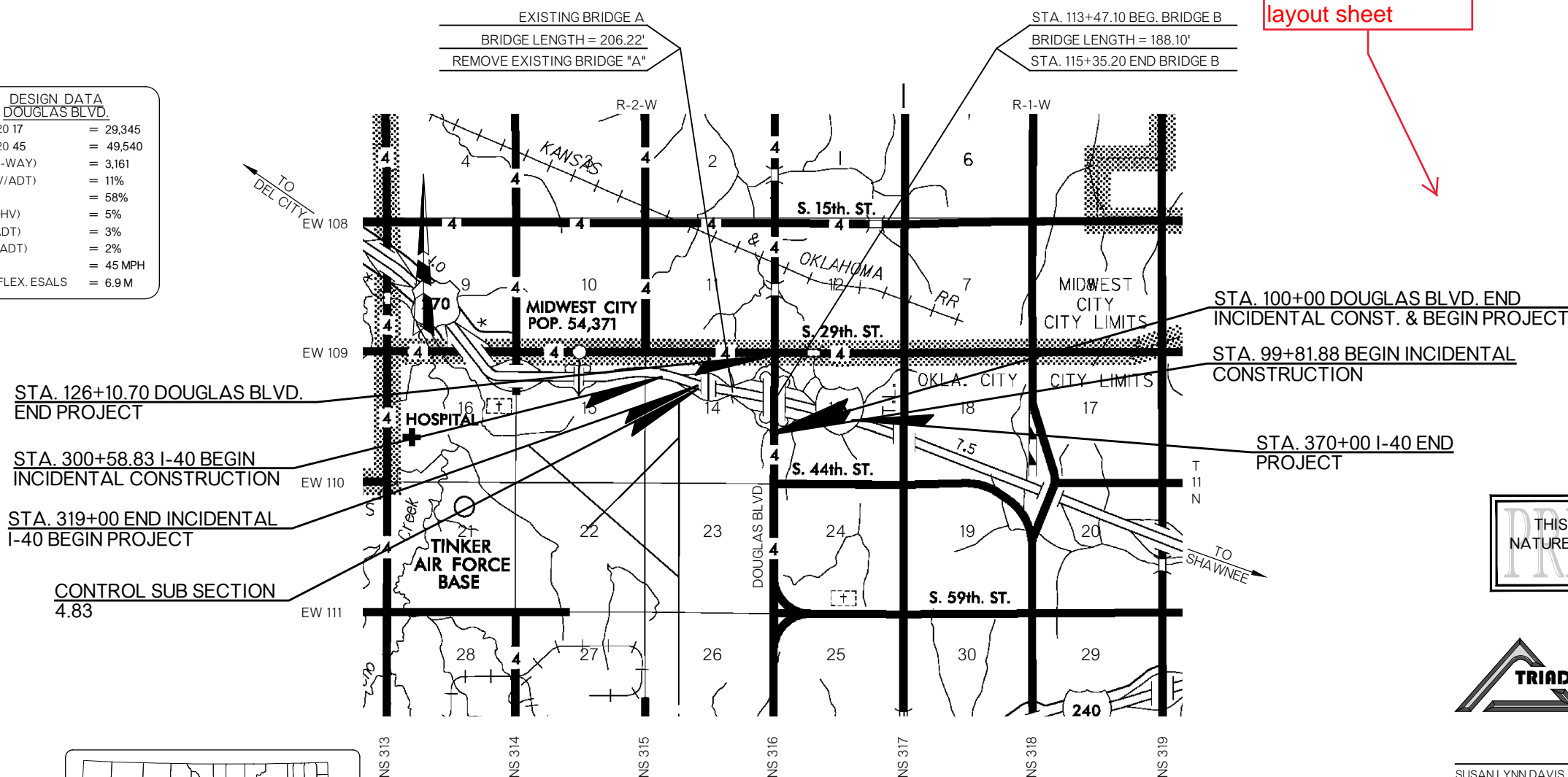
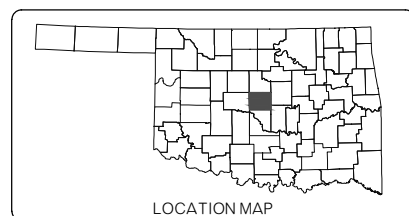
DESIGN DATA DOUGLAS BLVD.	
ADT 20 17	= 29,345
ADT 20 45	= 49,540
DHV (1-WAY)	= 3,161
K (DHV/ADT)	= 11%
D	= 58%
T (% DHV)	= 5%
T (% ADT)	= 3%
T3 (% ADT)	= 2%
V	= 45 MPH
20YR FLEX. ESALS	= 6.9 M

SCALES

PLAN	1" = 30'
PROFILE HOR.	1" = 30'
VER.	1" = 3'
LAYOUT MAP	1" = 3,000'

CONVENTIONAL SYMBOLS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP
- SECTION LINES
- QUARTER SECTION LINES
- FENCES
- GROUND LINE
- EXISTING ROADS
- BASE LINE
- GRADE LINES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- OIL WELLS
- DRAINAGE STRUCTURES - IN PLACE
- DRAINAGE STRUCTURES - NEW
- RIGHT-OF-WAY LINES - EXISTING
- RIGHT-OF-WAY LINES - NEW
- CONTROLLED ACCESS
- RIGHT-OF-WAY FENCE



STA. 126+10.70 DOUGLAS BLVD.
END PROJECT

STA. 300+58.83 I-40 BEGIN
INCIDENTAL CONSTRUCTION

STA. 319+00 END INCIDENTAL
I-40 BEGIN PROJECT

CONTROL SUB SECTION
4.83

STA. 113+47.10 BEG. BRIDGE B
BRIDGE LENGTH = 188.10'
STA. 115+35.20 END BRIDGE B

STA. 100+00 DOUGLAS BLVD. END
INCIDENTAL CONST. & BEGIN PROJECT

STA. 99+81.88 BEGIN INCIDENTAL
CONSTRUCTION

STA. 370+00 I-40 END
PROJECT

NOTE: PROJECT LENGTH BASED ON I-40 STATIONING.

ROADWAY LENGTH	7,710.70 FT.	1.460 MI.
BRIDGE LENGTH	188.10 FT.	0.036 MI.
PROJECT LENGTH		1.460 MI.

EQUATIONS: NONE
EXCEPTION: NONE

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

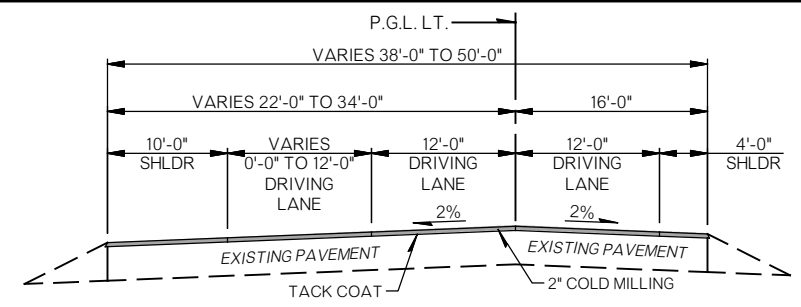


3020 N.W. 149TH STREET
OKLAHOMA CITY, OK 73134
PH. (405) 752-1122
FAX (405) 752-8855
CA# 1759, RENEWAL 06-30-2019

SUSAN LYNN DAVIS
REGISTERED PROFESSIONAL ENGINEER NO. 16026 DATE

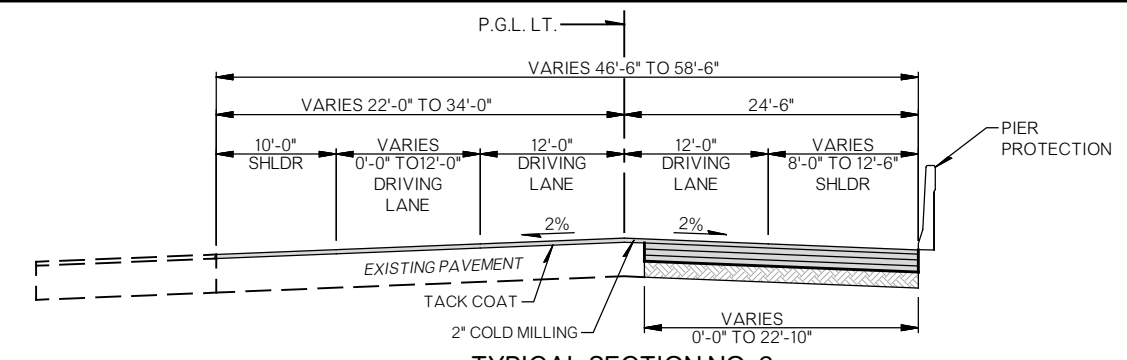
OKLAHOMA DEPARTMENT OF TRANSPORTATION		DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
DATE APPROVED		DATE APPROVED	
BY		BY	
	CHIEF ENGINEER		DIVISION ADMINISTRATOR
SWO 4834(1)	F.A. PROJECT NO. J2-8992(004)SS		
COUNTY OKLAHOMA COUNTY	HIGHWAY I-40		SHEET NO. 1

P.E. NO. XXXXX



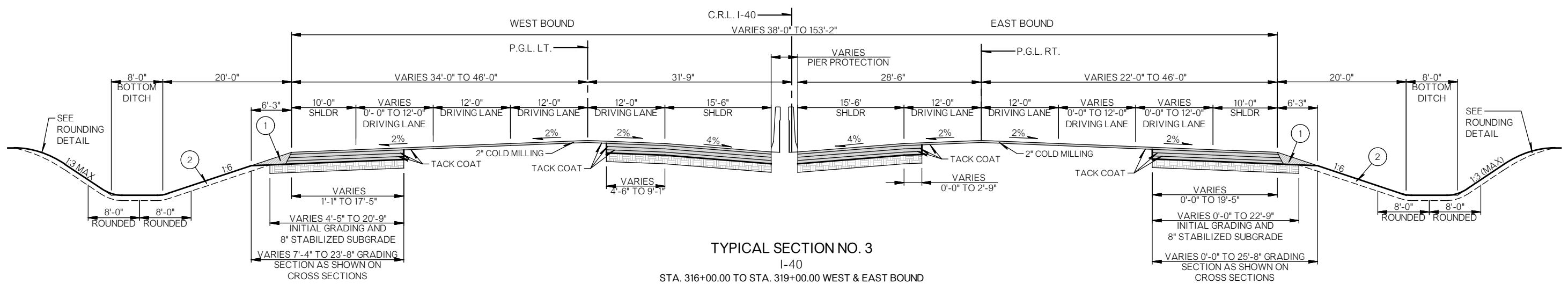
TYPICAL SECTION NO. 1
I-40
STA. 300+58.53 TO STA. 306+16.37

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES & 4'-0" (INSIDE) SHOULDER	10'-0" (OUTSIDE) SHOULDER.
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 76-28OK)	2" SUPERPAVE TYPE S4 (PG 64-22OK)



TYPICAL SECTION NO. 2
I-40
STA. 306+16.37 TO STA. 316+00.00

PAVEMENT REQUIREMENTS			
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	OVERLAY	10'-0" (OUTSIDE) & 8'-0" TO 12'-6" (INSIDE) SHOULDER
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 76-28 OK)	2" SUPERPAVE TYPE S4 (PG 76-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 76-28 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3" SUPERPAVE TYPE S3 (PG 64-22 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3" SUPERPAVE TYPE S3 (PG 64-22 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)



TYPICAL SECTION NO. 3
I-40
STA. 316+00.00 TO STA. 319+00.00 WEST & EAST BOUND

PAVEMENT REQUIREMENTS			
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	OVERLAY	10'-0" (OUTSIDE) & 15'-6" (INSIDE) SHOULDER
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 76-28 OK)	2" SUPERPAVE TYPE S4 (PG 76-28 OK)	2" SUPERPAVE TYPE S4 (PG 64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 76-28 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3" SUPERPAVE TYPE S3 (PG 64-22 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3" SUPERPAVE TYPE S3 (PG 64-22 OK)		3" SUPERPAVE TYPE S3 (PG 64-22 OK)

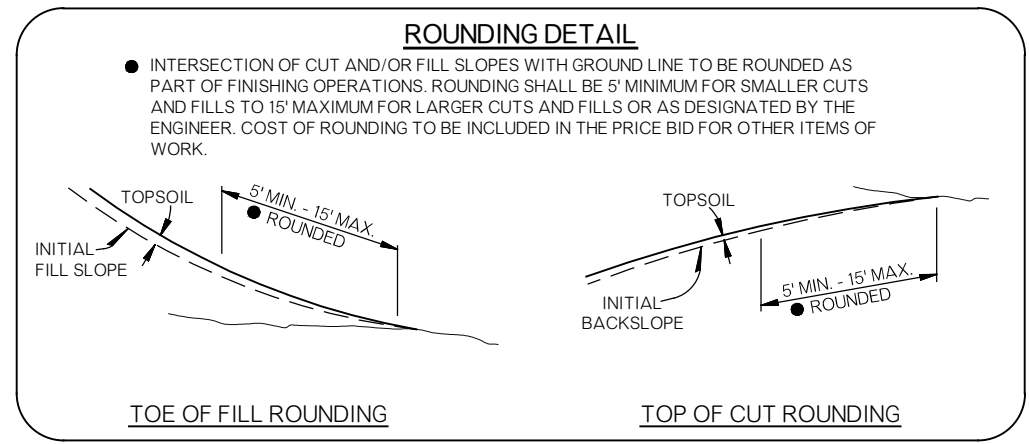
1 BACKFILL NOTE:
THIS AREA TO BE BACKFILLED & COMPACTED AS PART OF THE FINISHING OPERATIONS. COST TO BE INCLUDED IN PRICE BID FOR OTHER ITEMS OF WORK.

2 TOPSOIL NOTE:
THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATIONS SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

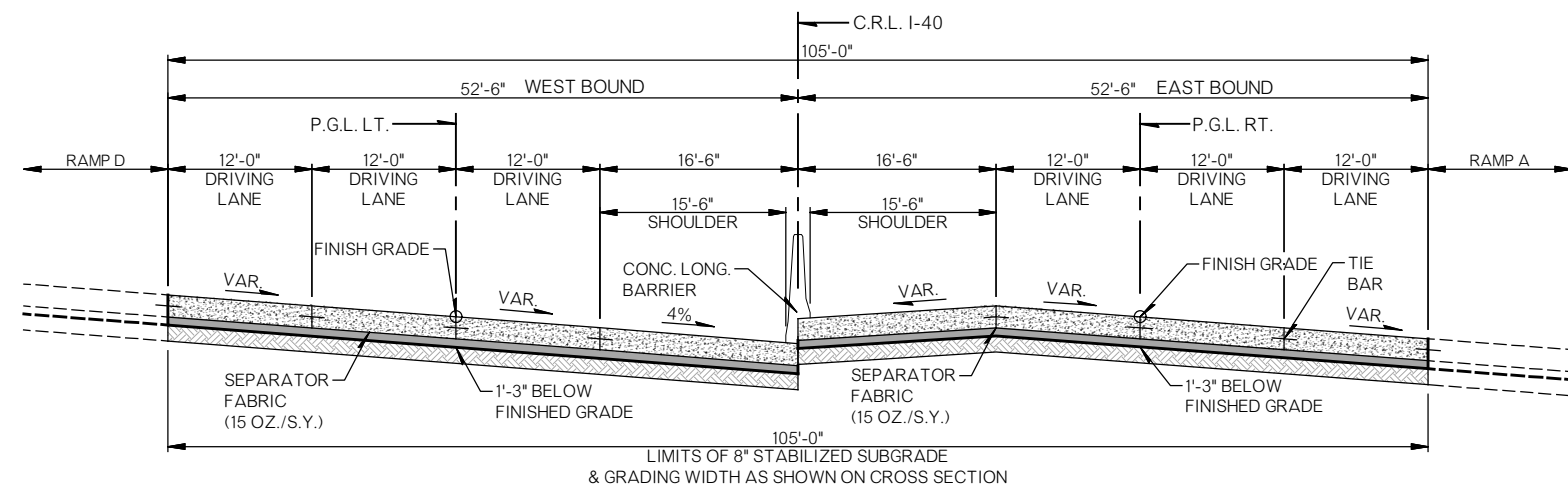
THE GRADING LINE AS SHOWN ON THE TYPICAL AND CROSS SECTIONS IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE MASSLINE BALANCE.

3 DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER OR SHELF.

(MC) CONCRETE CURB (4" MOUNTABLE-INTEGRAL)

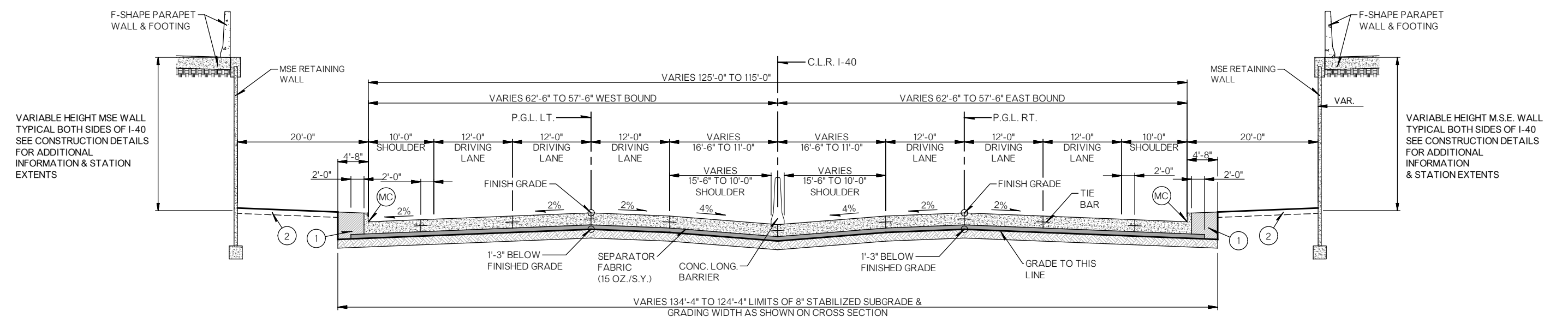


TYPICAL SECTION



TYPICAL SECTION NO. 4
I-40
STA. 319+00.00 TO STA. 327+06.35 WEST BOUND
STA. 319+00.00 TO STA. 328+66.79 EAST BOUND

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	16'-6" (INSIDE) SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 5
I-40
STA. 327+06.35 TO STA. 352+00.18 WEST BOUND
STA. 328+66.79 TO STA. 357+27.34 EAST BOUND

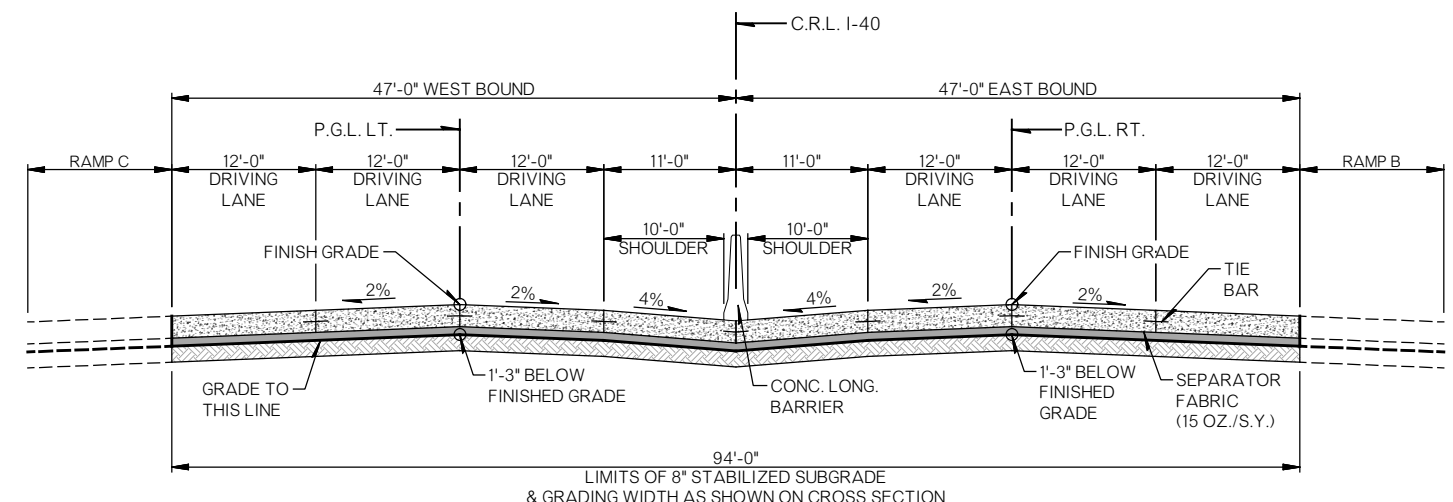
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	10'-0" & 16'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.

TYPICAL SECTION

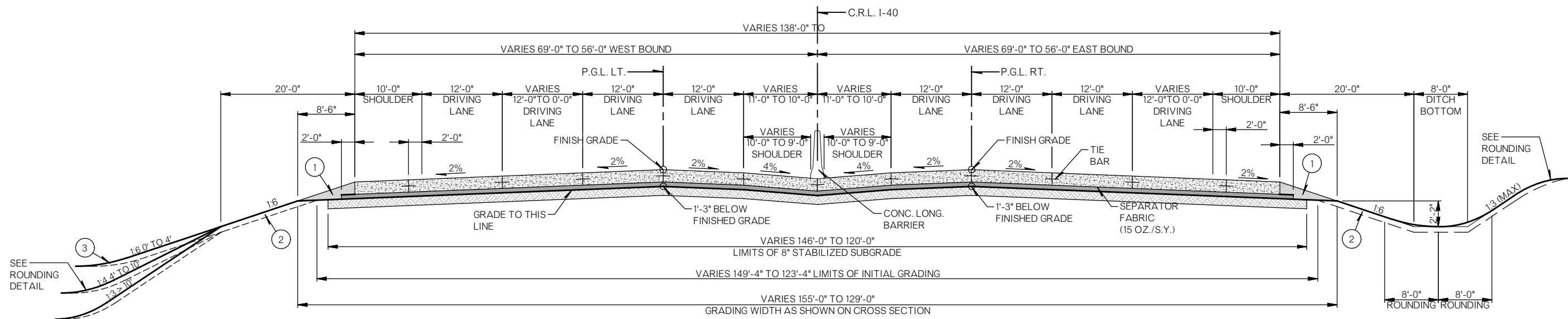
State Job No. 28992(04) Sheet No. 0005

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



TYPICAL SECTION NO. 6
I-40
STA. 352+00.18 TO STA. 365+00.00 WEST BOUND
STA. 357+27.34 TO STA. 367+00.00 EAST BOUND

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	11'-0" (INSIDE) SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



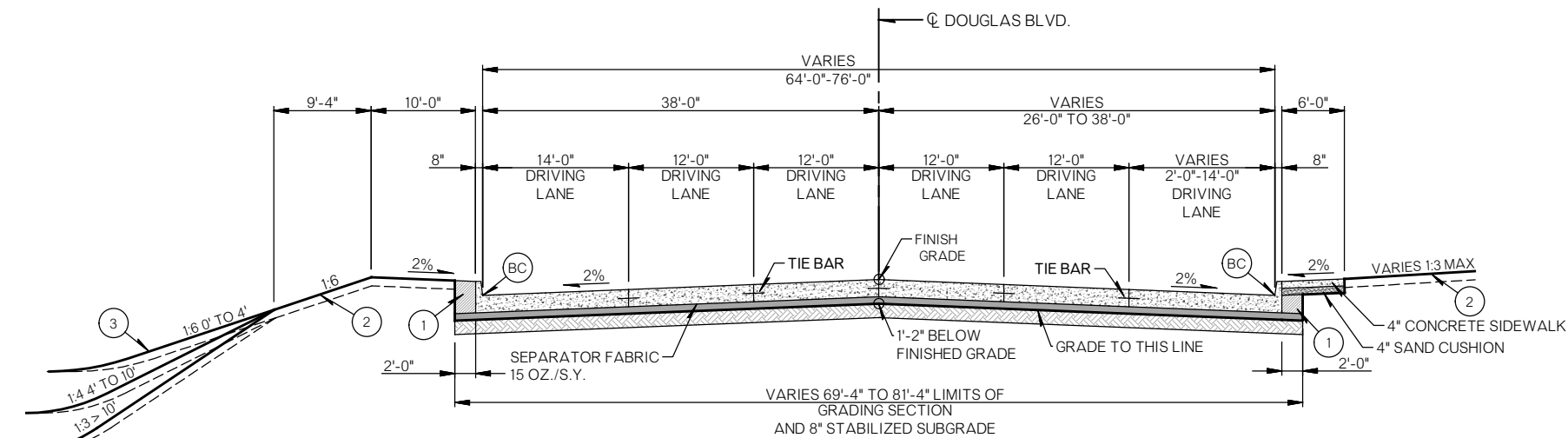
TYPICAL SECTION NO. 7
I-40
STA. 365+00.00 TO STA. 370+00.00 WEST BOUND
STA. 367+00.00 TO STA. 370+00.00 EAST BOUND

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	10'-0" (OUTSIDE) & 11'-0" TO 10'-6" (INSIDE) SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (MC) CONCRETE CURB (4" MOUNTABLE-INTEGRAL)

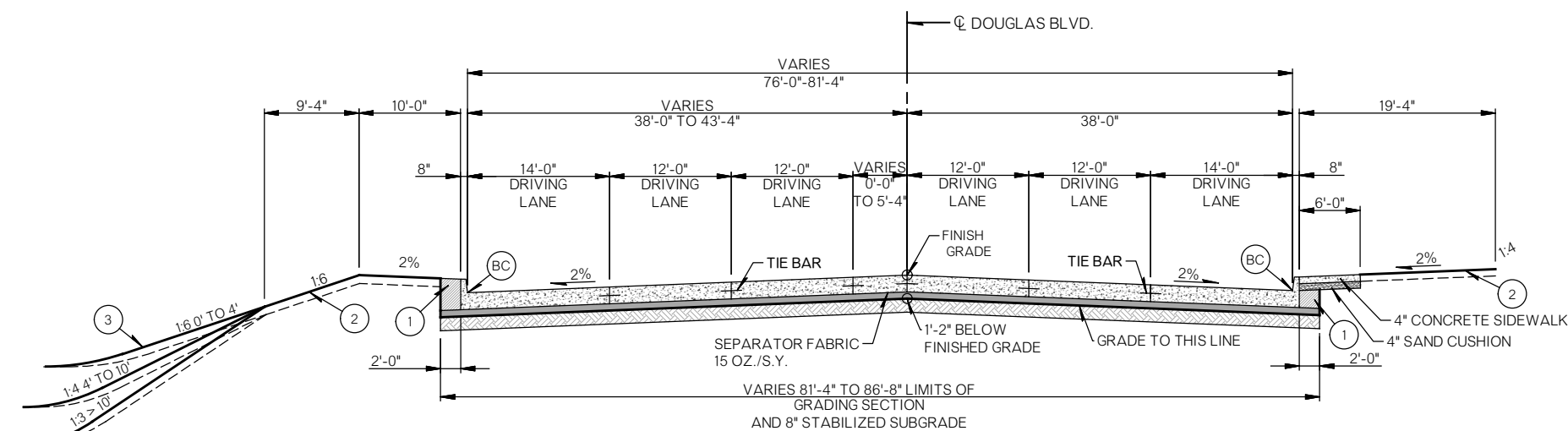
TYPICAL SECTION

State Job No. 28992(04) Sheet No. 0006



TYPICAL SECTION NO. 8
DOUGLAS BLVD.
STA. 100+00.00 TO STA. 104+28.41

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

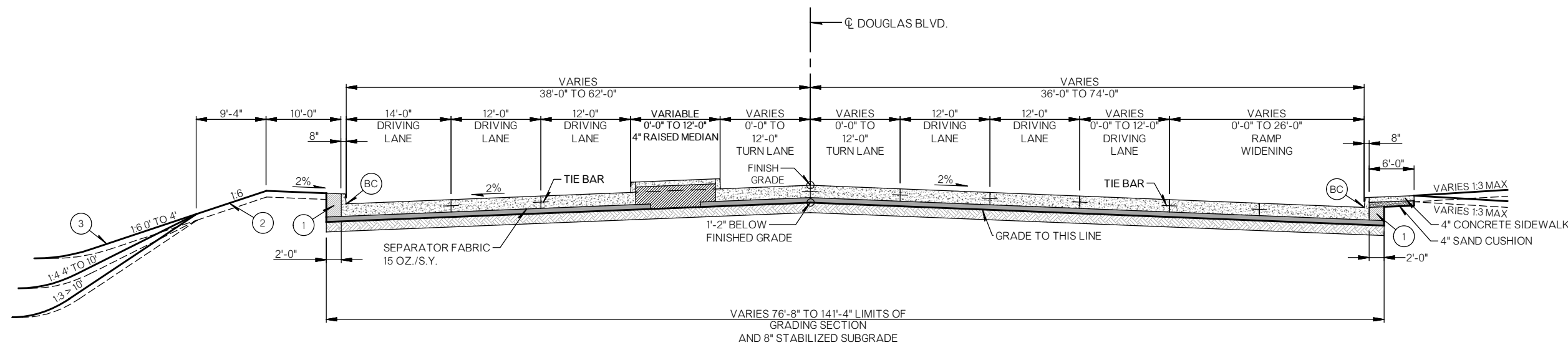


TYPICAL SECTION NO. 9
DOUGLAS BLVD.
STA. 104+28.41 TO STA. 105+70.68

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

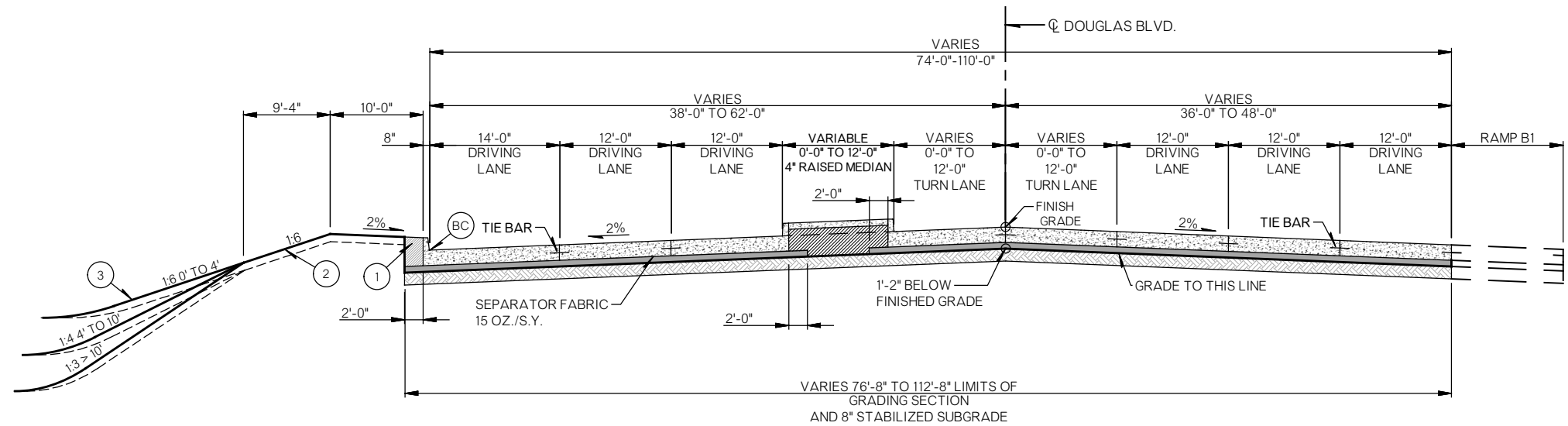
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



TYPICAL SECTION NO. 10
DOUGLAS BLVD.
STA. 105+70.68 TO STA. 108+27.88

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 11
DOUGLAS BLVD.
STA. 108+27.88 TO STA. 110+05.96

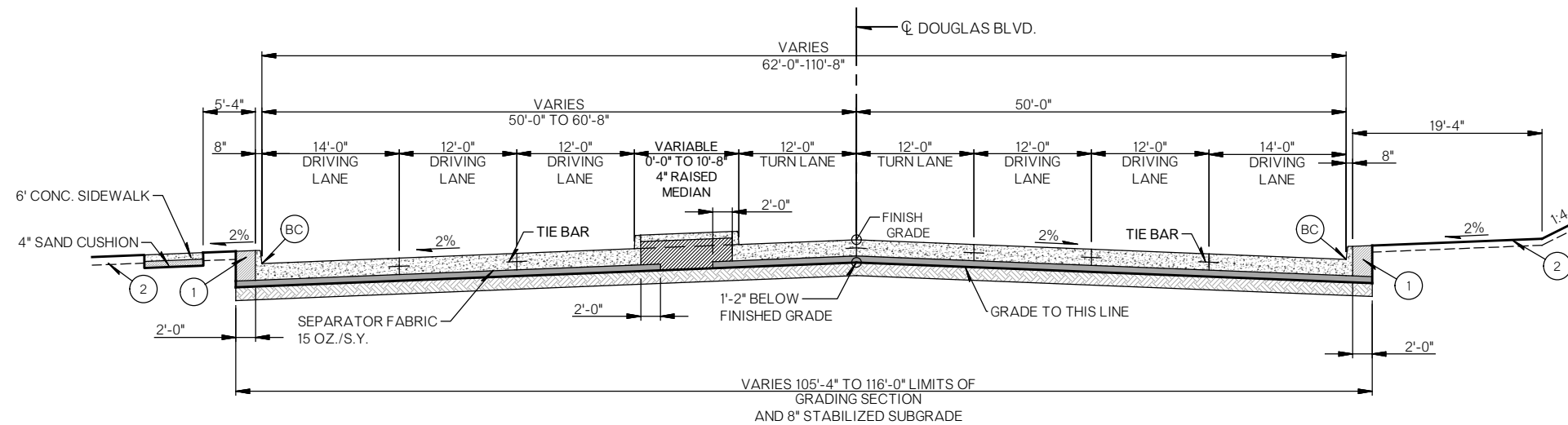
PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION

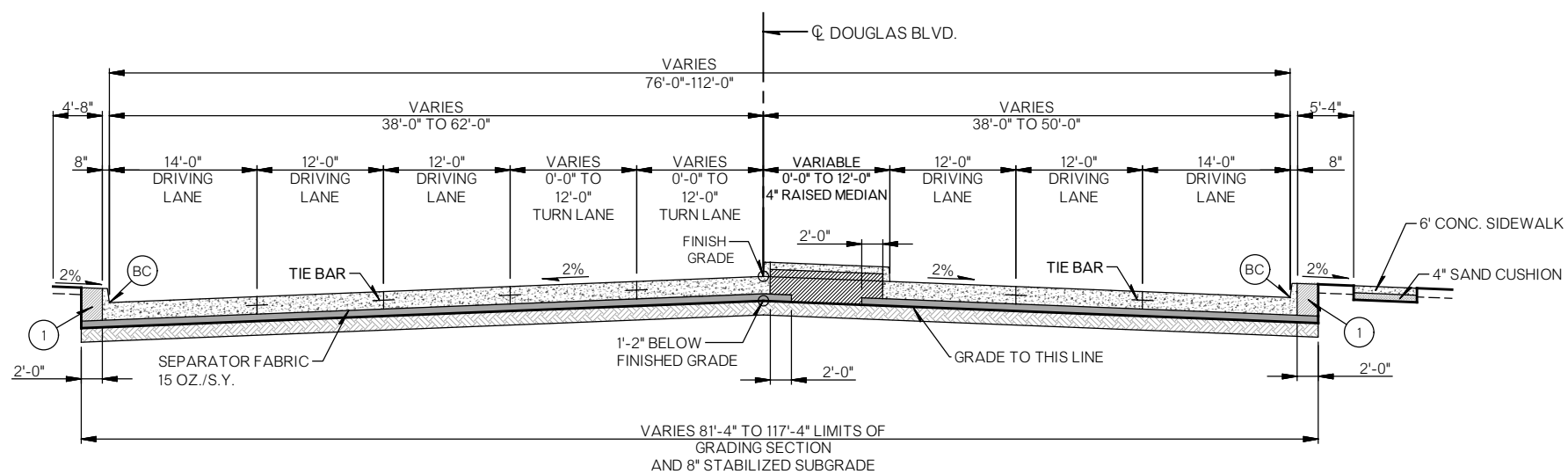
State Job No. 28992(04) Sheet No. 0008

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



TYPICAL SECTION NO. 12
DOUGLAS BLVD.
STA. 110+05.96 TO STA. 113+11.89

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

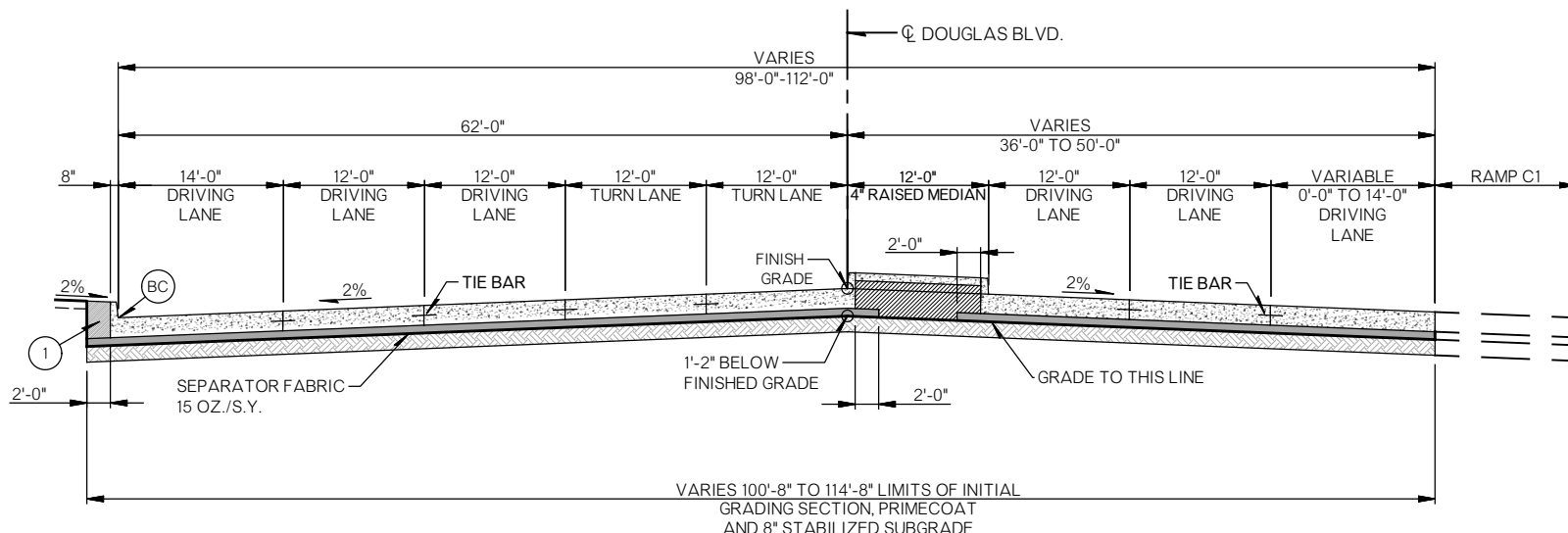


TYPICAL SECTION NO. 13
DOUGLAS BLVD.
STA. 115+71.25 TO STA. 116+46.20

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

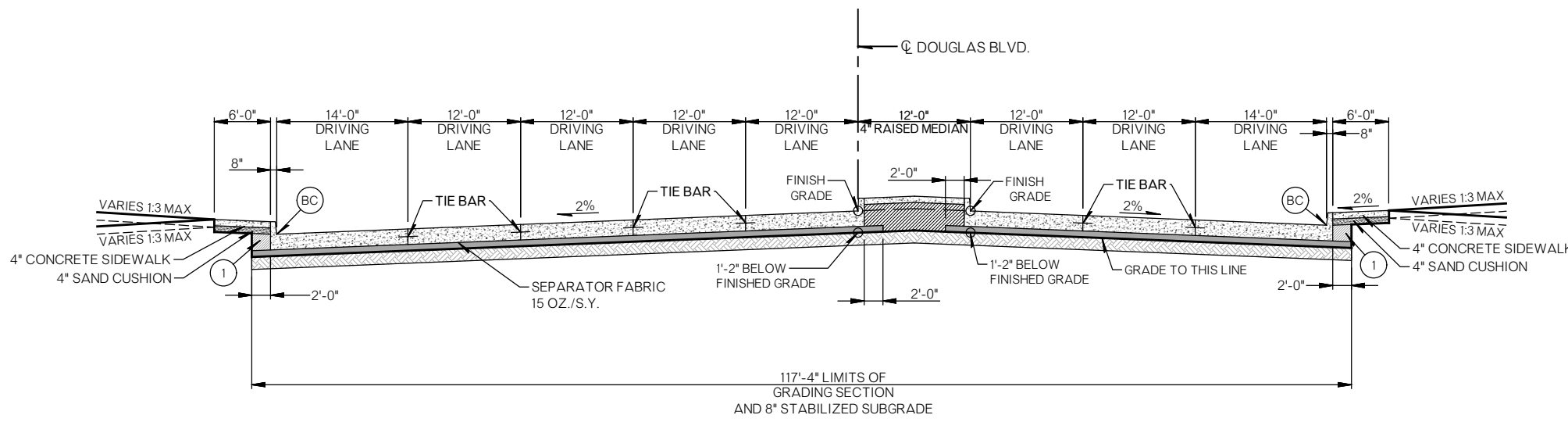
- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



TYPICAL SECTION NO. 14
DOUGLAS BLVD.
STA. 116+46.20 TO STA. 117+45.88

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 15
DOUGLAS BLVD.
STA. 117+45.88 TO STA. 118+50.00

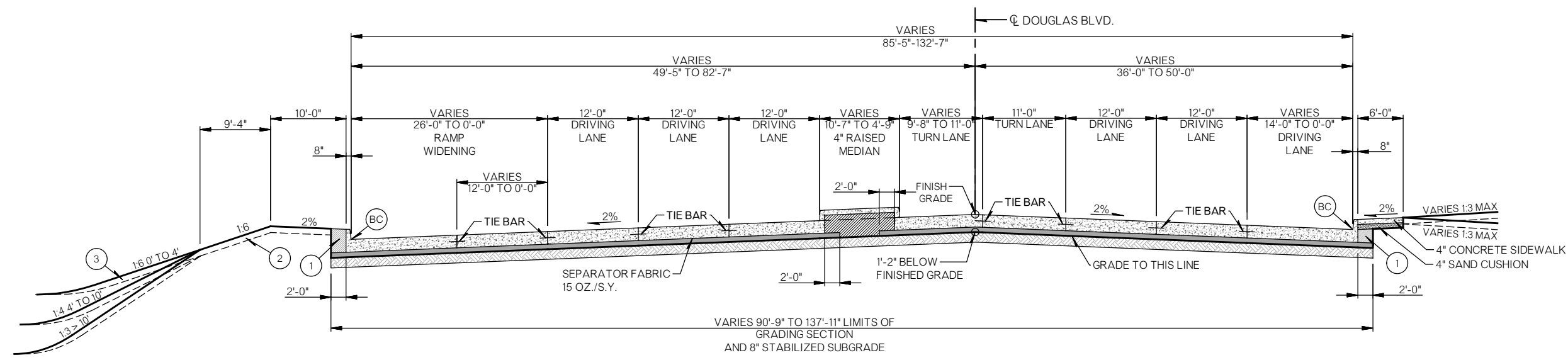
PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION

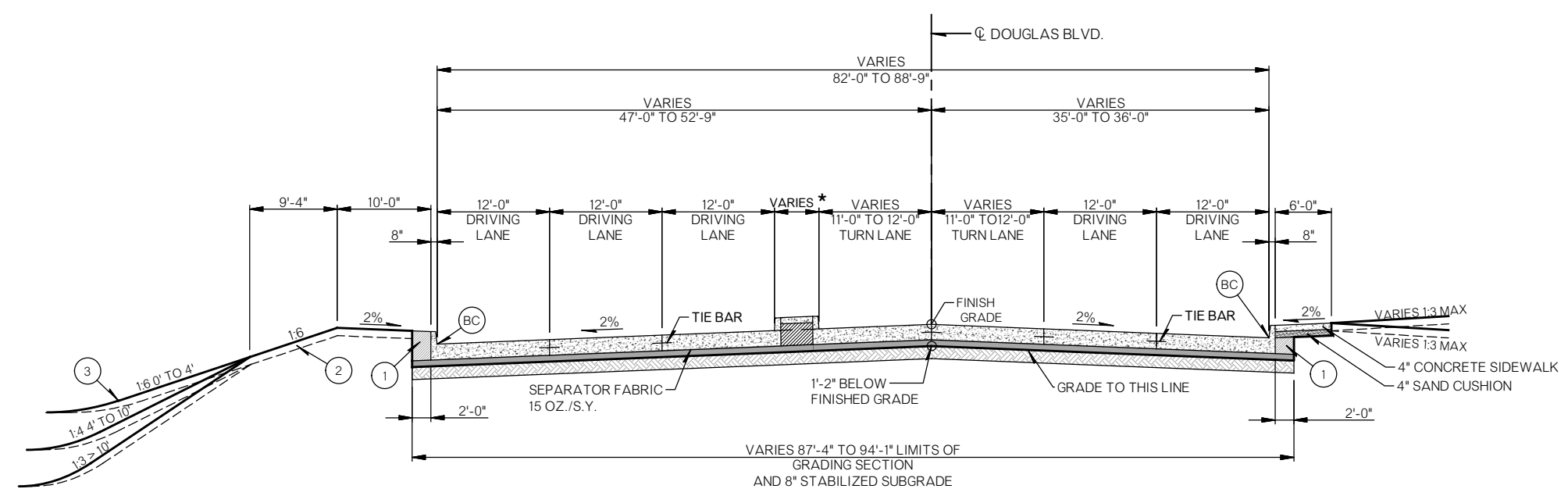
State Job No. 28992(04) Sheet No. 0010

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



TYPICAL SECTION NO. 16
DOUGLAS BLVD.
STA. 121+04.33 TO STA. 123+44.33

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE



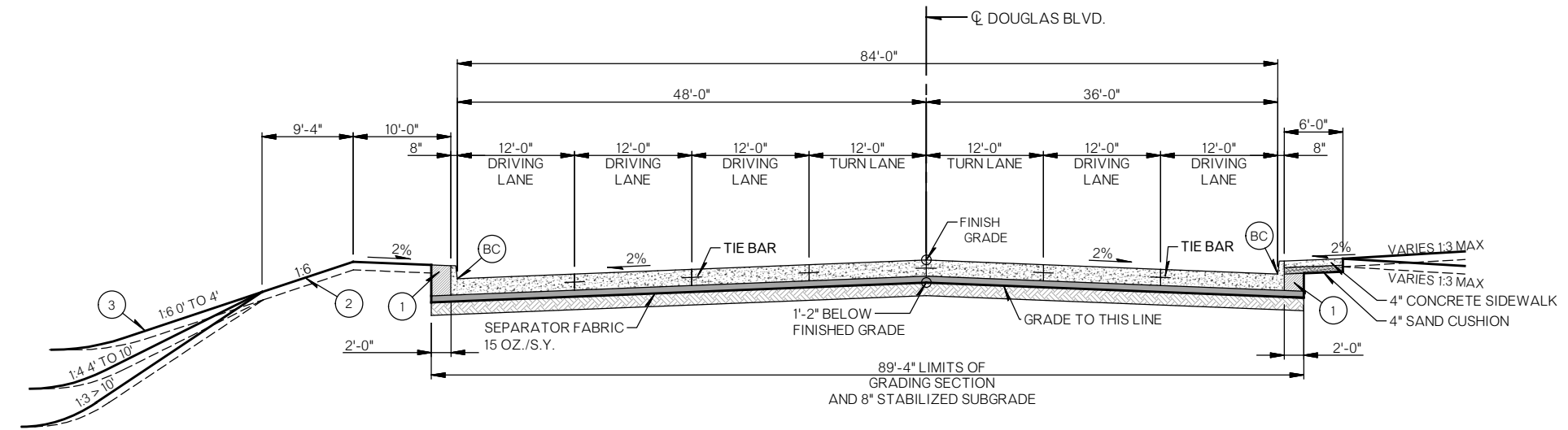
* VARIABLE 4'-9" TO 4'-0" 4" RAISED MEDIAN
VARIABLE 4'-0" TO 0'-0" PAVED MEDIAN

TYPICAL SECTION NO. 17
DOUGLAS BLVD.
STA. 123+44.33 TO STA. 124+90.30

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

- (1) SEE BACKFILL NOTE SHEET NO. 0004.
- (2) SEE TOPSOIL SHEET NO. 0004.
- (3) SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



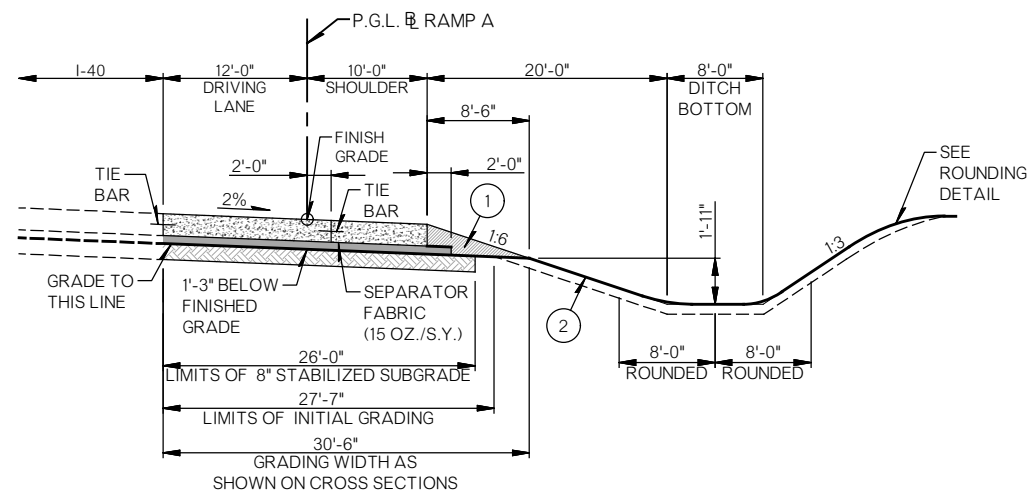
TYPICAL SECTION NO. 18
DOUGLAS BLVD.
STA. 124+90.30 TO STA. 125+80.60

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" DRIVING LANES
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

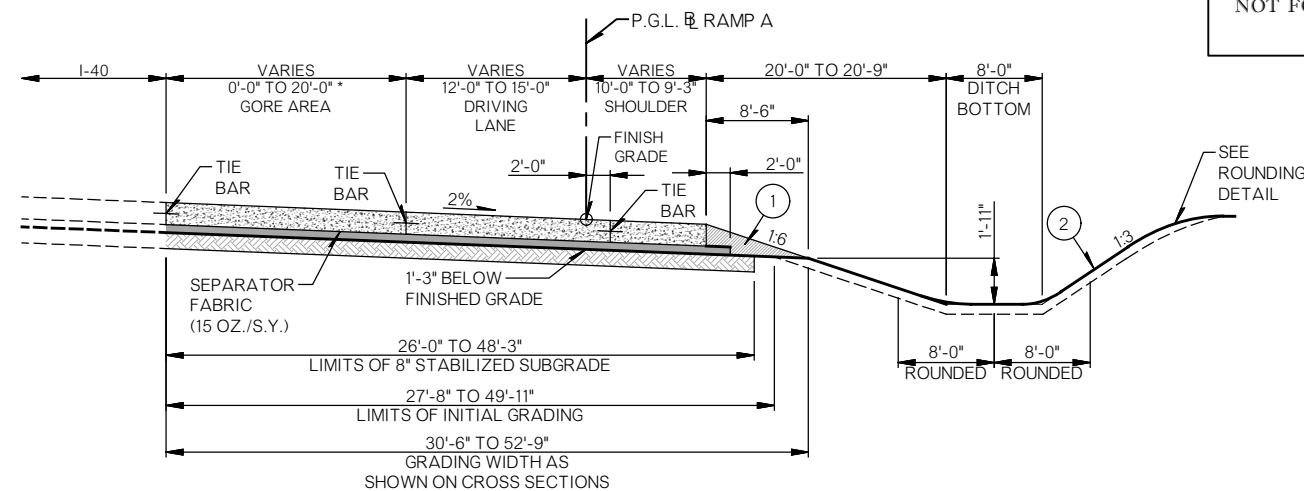
TYPICAL SECTION

State Job No. 28992(04) Sheet No. 0012



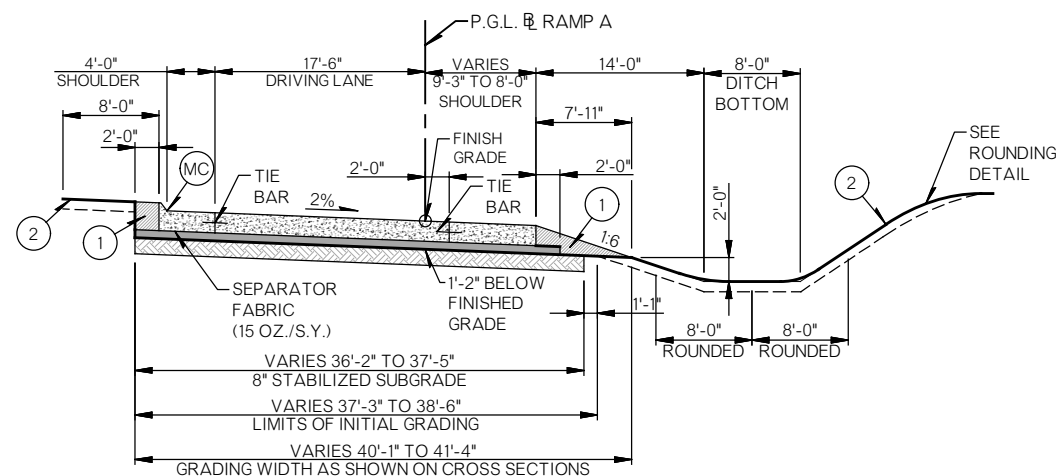
TYPICAL SECTION NO. 19
RAMP A
STA. 318+93.18 TO STA. 322+94.04

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANE	10'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



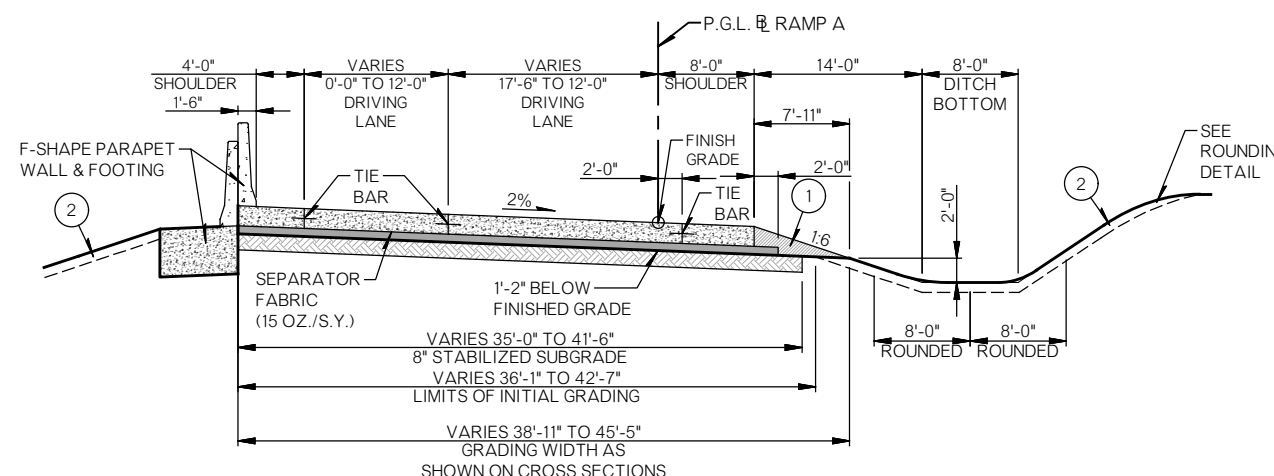
TYPICAL SECTION NO. 20
RAMP A
STA. 322+94.04 TO STA. 328+47.57
* GORE TAPER BEGIN STA. 323+45.57

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" TO 19'-0" DRIVING LANE	10'-0" TO 8'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 21
RAMP A
STA. 328+47.57 TO STA. 329+88.22

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

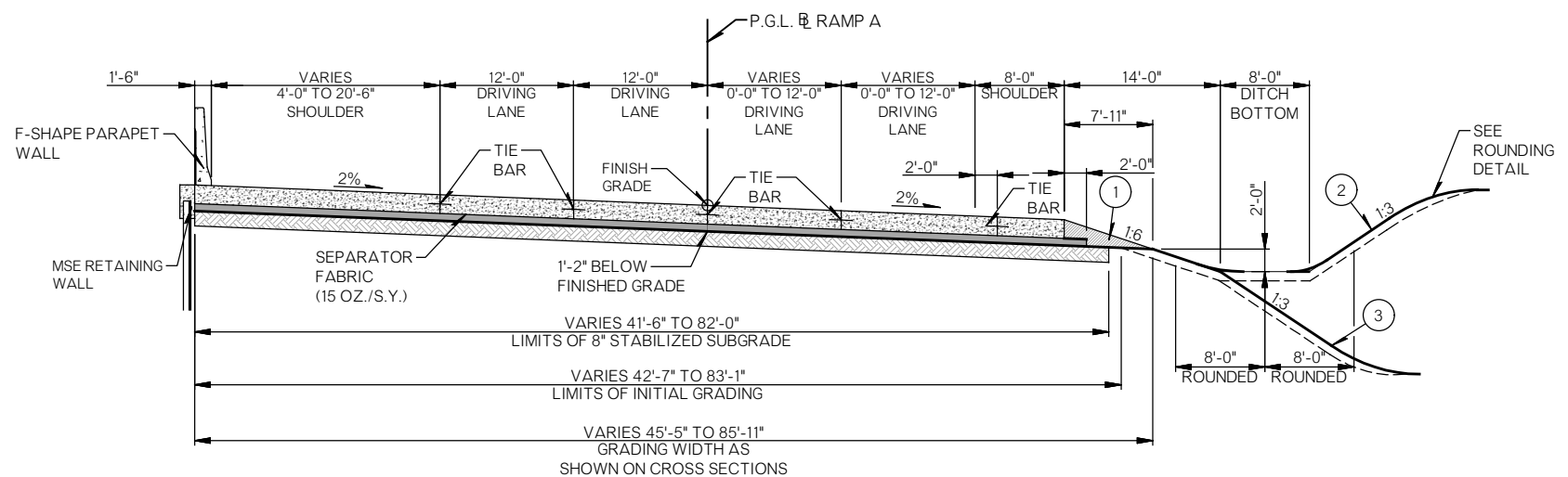


TYPICAL SECTION NO. 22
RAMP A
STA. 329+88.22 TO STA. 332+08.90

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" & 12'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

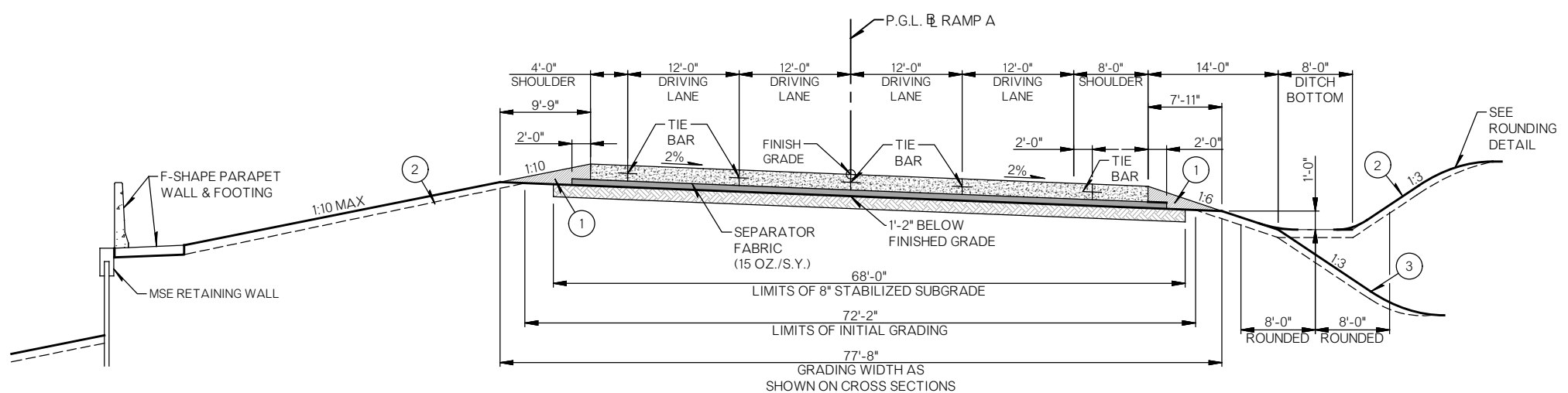
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (MC) CONCRETE CURB (4" MOUNTABLE-INTEGRAL)

TYPICAL SECTION



TYPICAL SECTION NO. 23
RAMP A
STA. 332+08.90 TO STA. 334+48.90

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 24
RAMP A
STA. 334+48.90 TO STA. 339+00.70

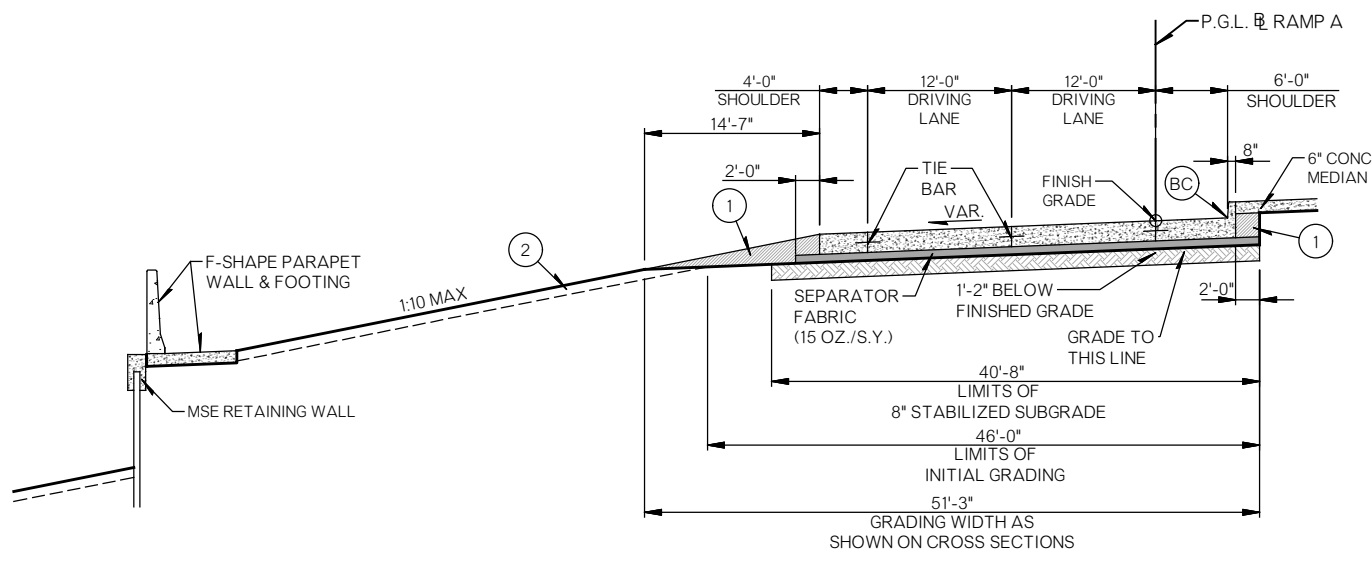
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.

TYPICAL SECTION

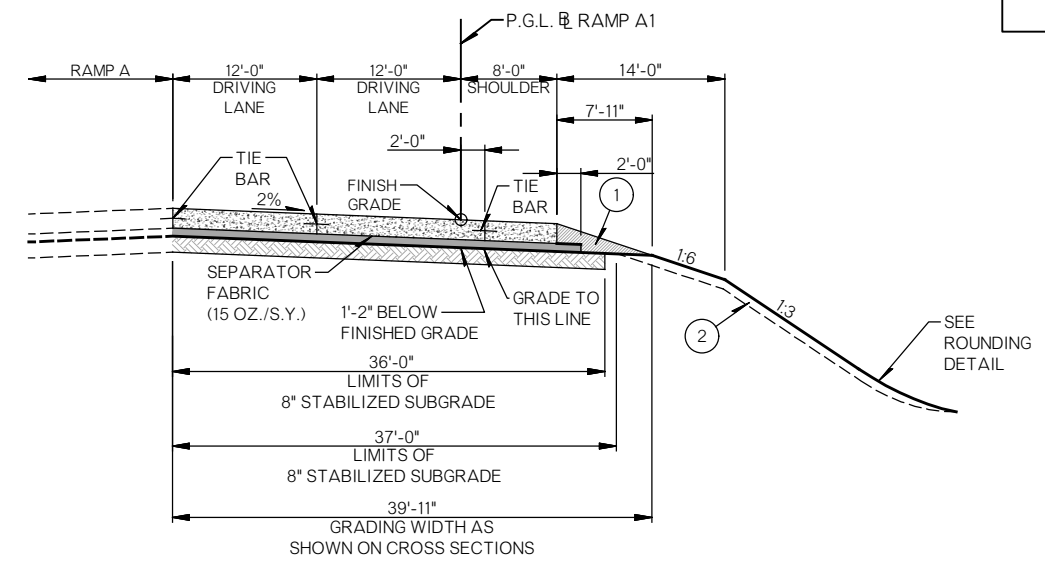
State Job No. 28992(04) Sheet No. 0014

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



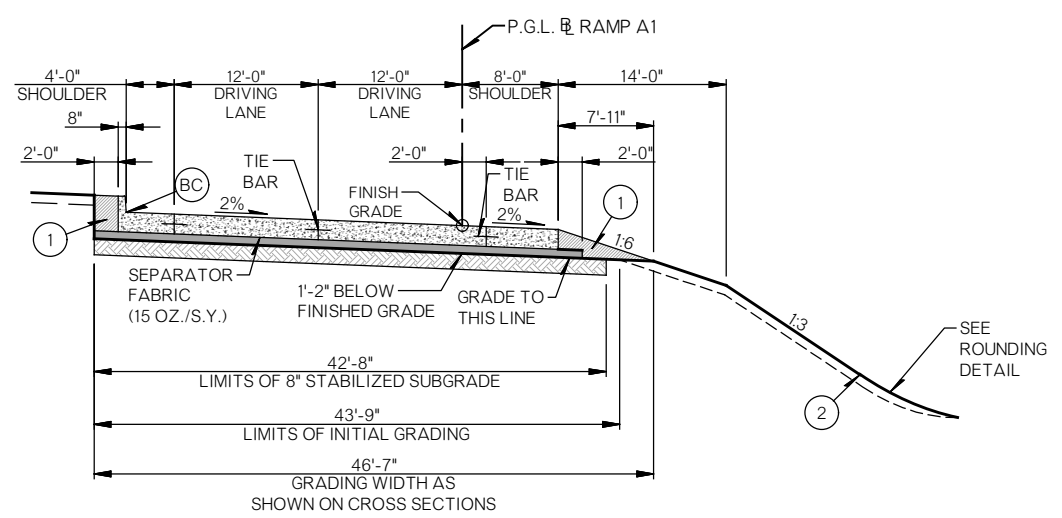
TYPICAL SECTION NO. 25
RAMP A
STA. 339+00.70 TO STA. 340+63.14

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 6'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



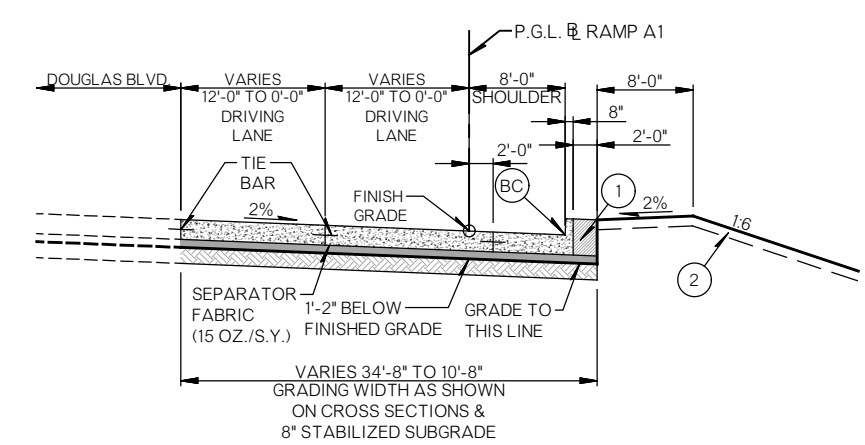
TYPICAL SECTION NO. 26
RAMP A1
STA. 339+02.30 TO STA. 339+85.44

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 27
RAMP A1
STA. 339+85.44 TO STA. 341+34.75

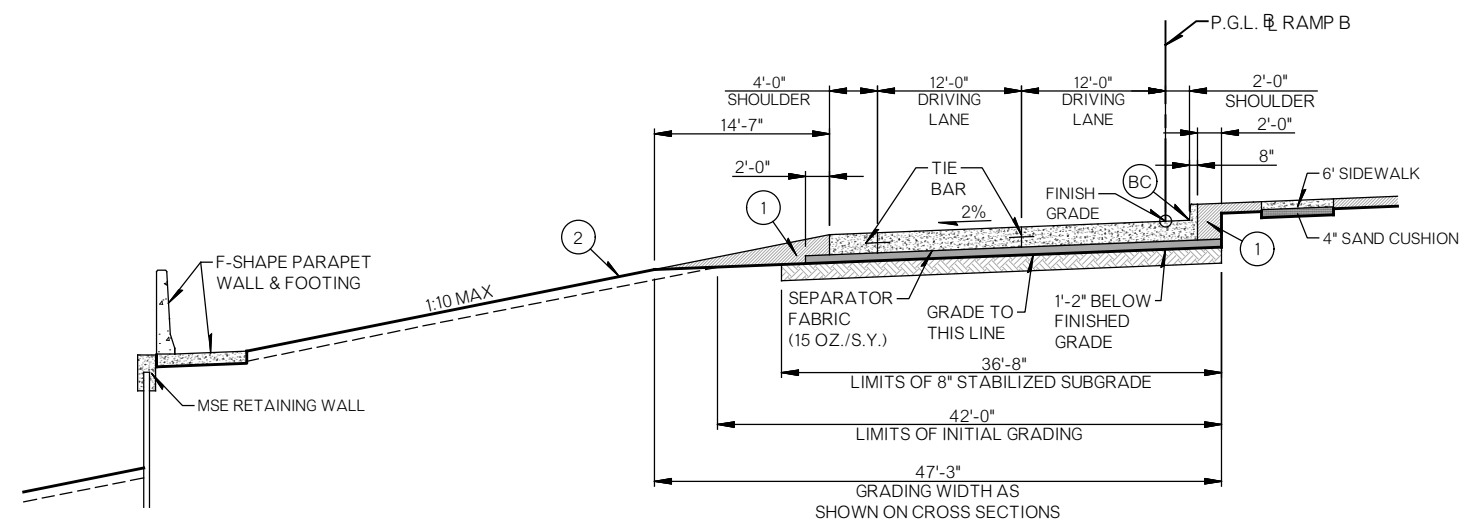
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 28
RAMP A1
STA. 341+34.75 TO STA. 342+21.40

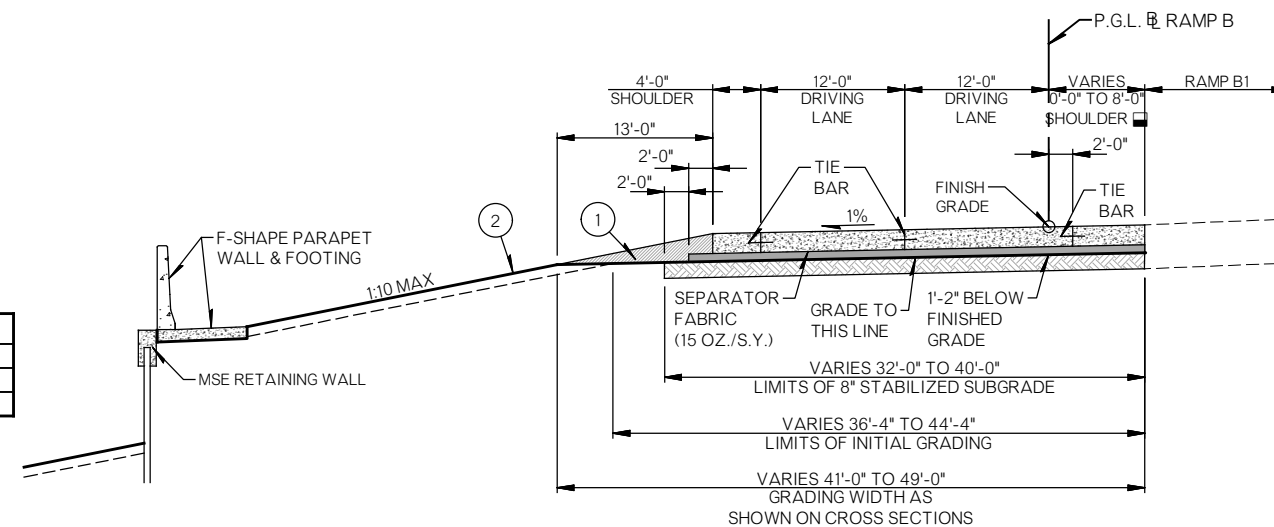
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES & 8'-0" SHOULDER	
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	
BASE COURSE	4" CEMENT TREATED BASE	

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.



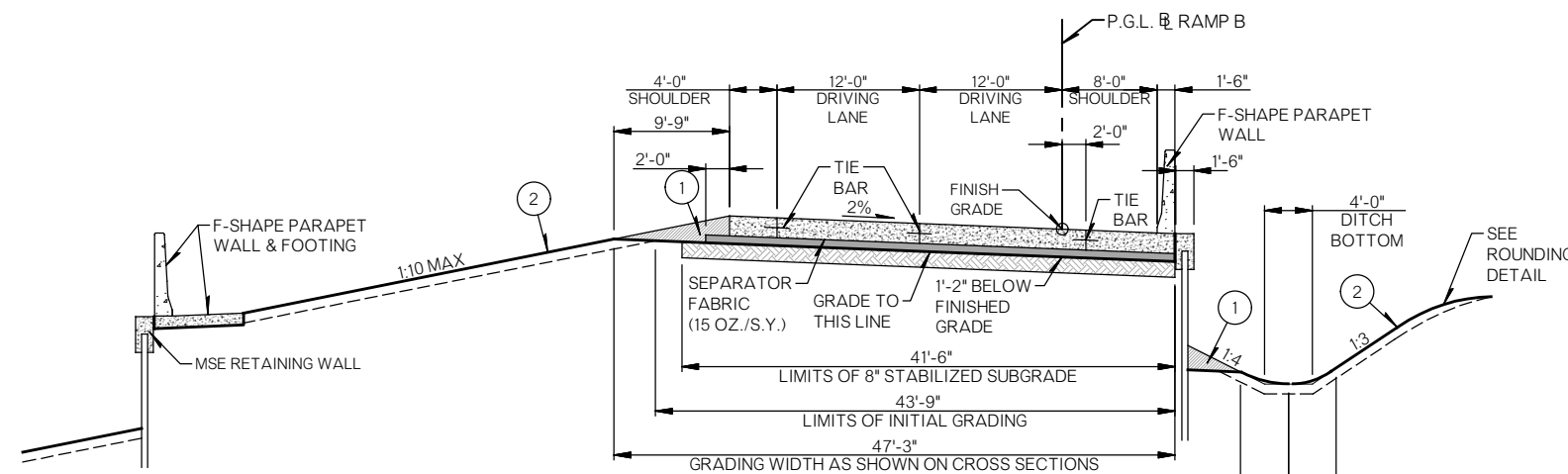
TYPICAL SECTION NO. 29
RAMP B
STA. 342+94.02 TO STA. 344+69.12

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	2'-0" & 4'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 30
RAMP B
STA. 344+90.77 TO STA. 345+91.26
NO SHOULDER FROM STA. 344+90.77 TO STA. 345+83.76

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

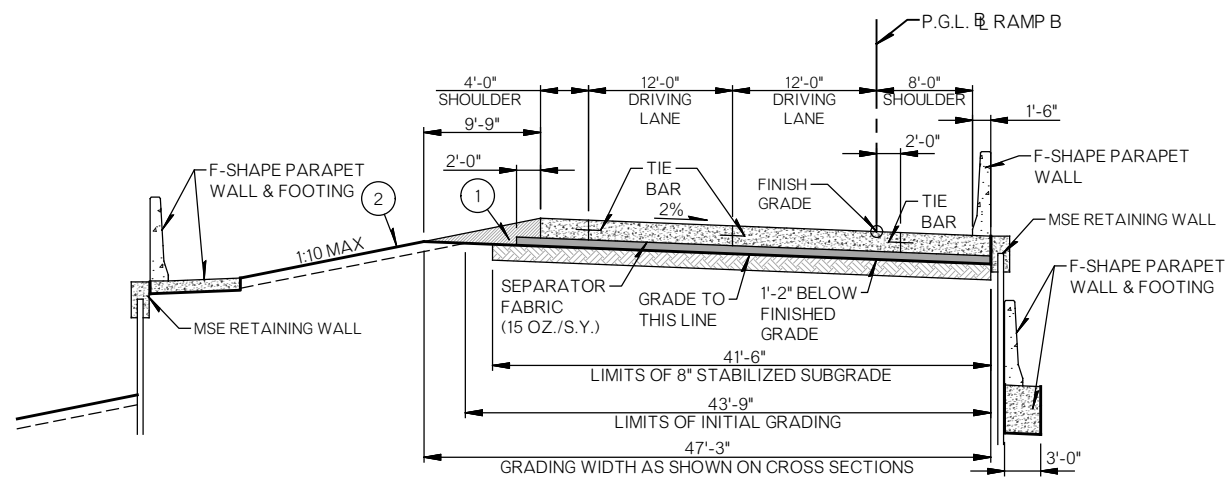


TYPICAL SECTION NO. 31
RAMP B
STA. 345+91.26 TO STA. 348+03.91

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" TO 15'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

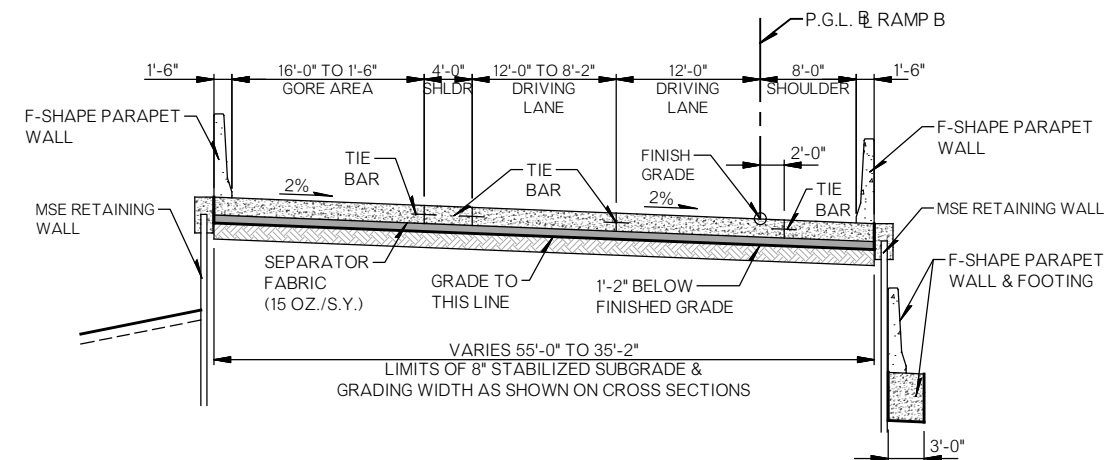
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



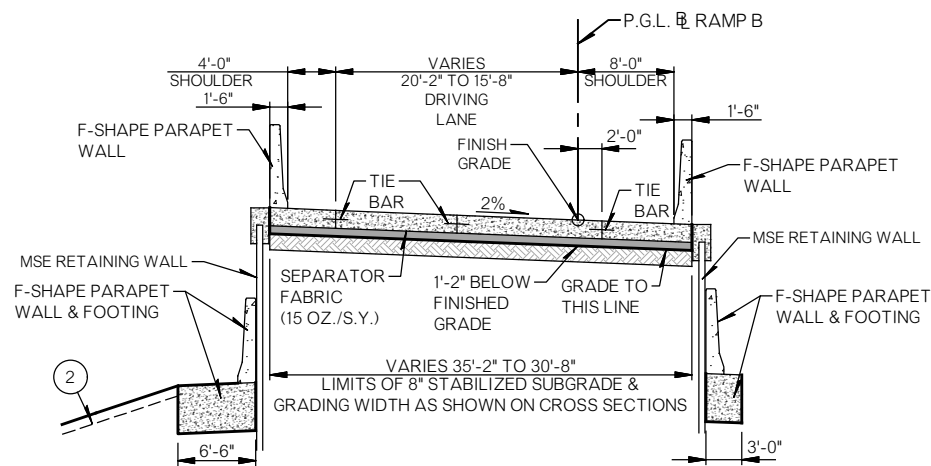
TYPICAL SECTION NO. 32
RAMP B
STA. 348+03.91 TO STA. 350+71.72

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" TO 15'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



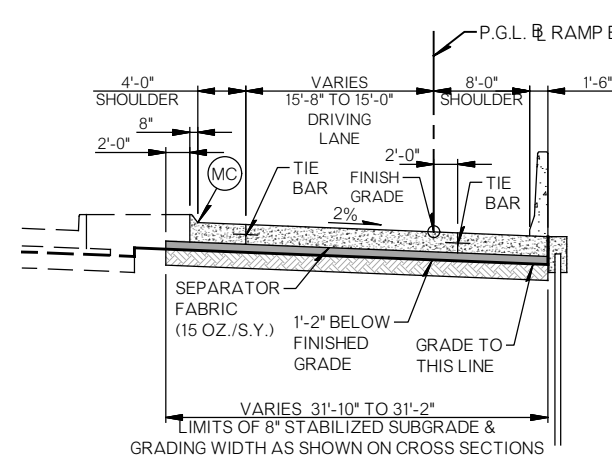
TYPICAL SECTION NO. 33
RAMP B
STA. 350+71.72 TO STA. 353+51.08

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 34
RAMP B
STA. 353+51.08 TO STA. 355+75.52

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

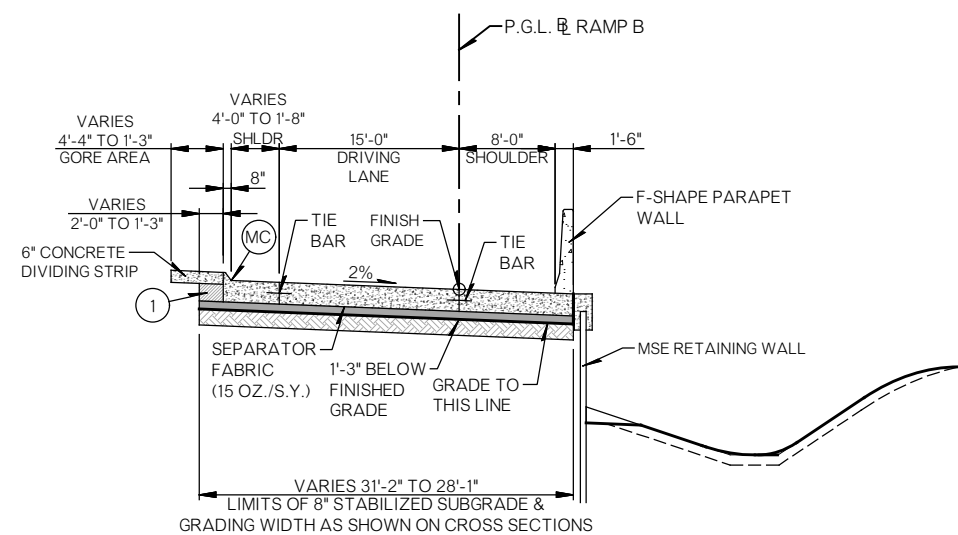


TYPICAL SECTION NO. 35
RAMP B
STA. 355+75.52 TO STA. 356+09.54

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANE	5'-7" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

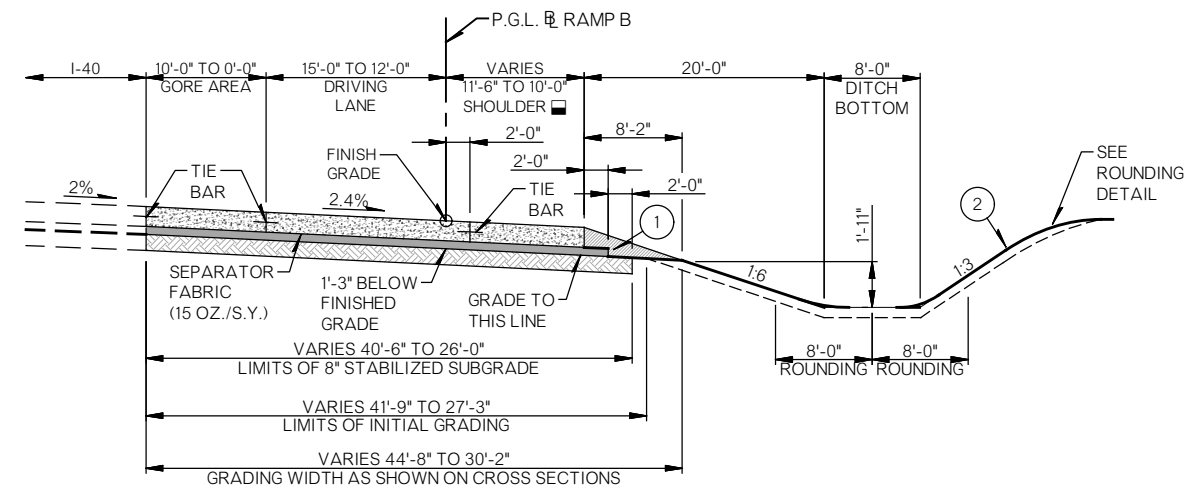
- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (MC) CONCRETE CURB (4" MOUNTABLE-INTEGRAL)

TYPICAL SECTION



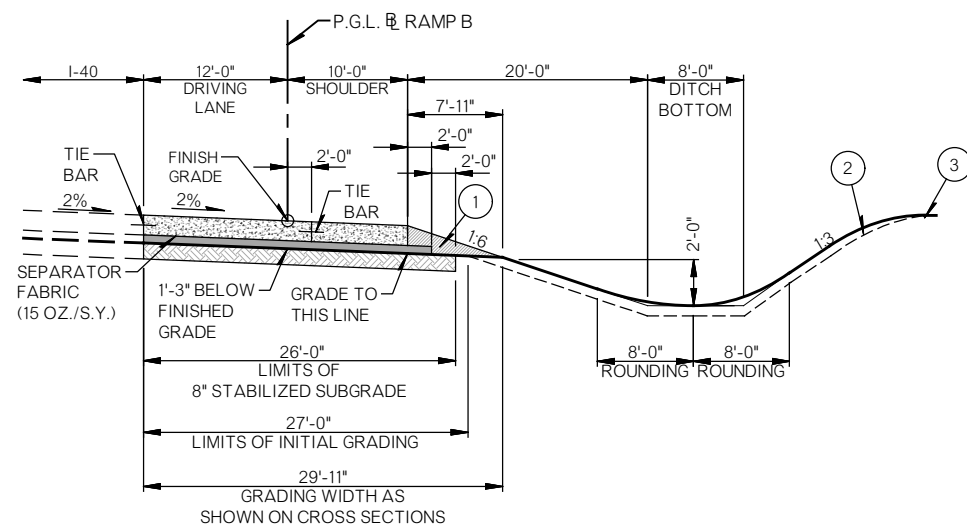
TYPICAL SECTION NO. 36
RAMP B
STA. 356+09.54 TO STA. 357+28.16

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



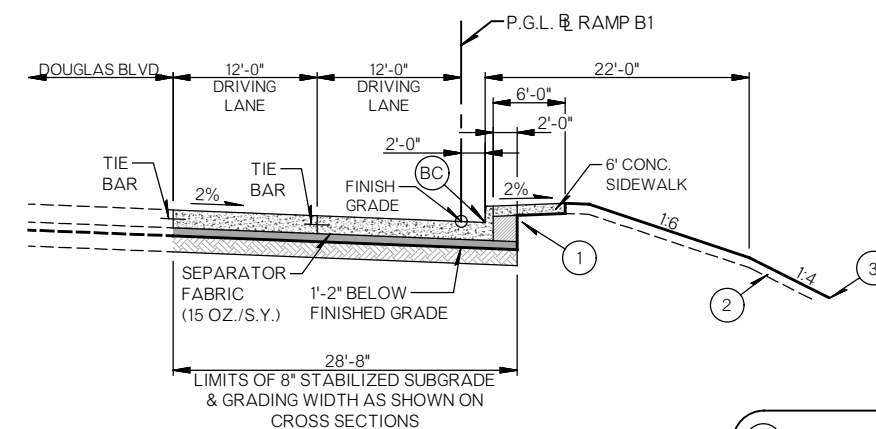
TYPICAL SECTION NO. 37
RAMP B
STA. 358+07.76 TO STA. 361+92.29

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	10'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 38
RAMP B
STA. 361+92.29 TO STA. 367+00.00

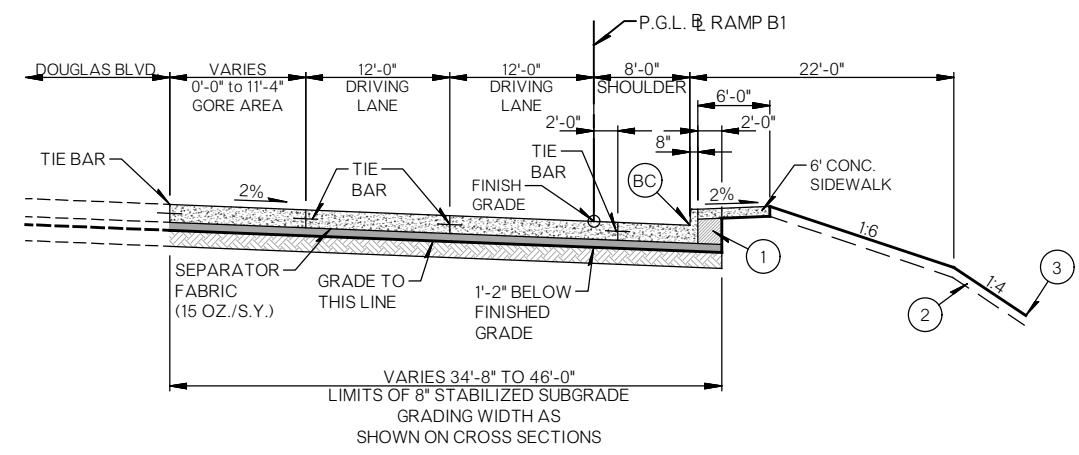
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	10'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 39
RAMP B1
STA. 340+96.61 TO STA. 341+90.71

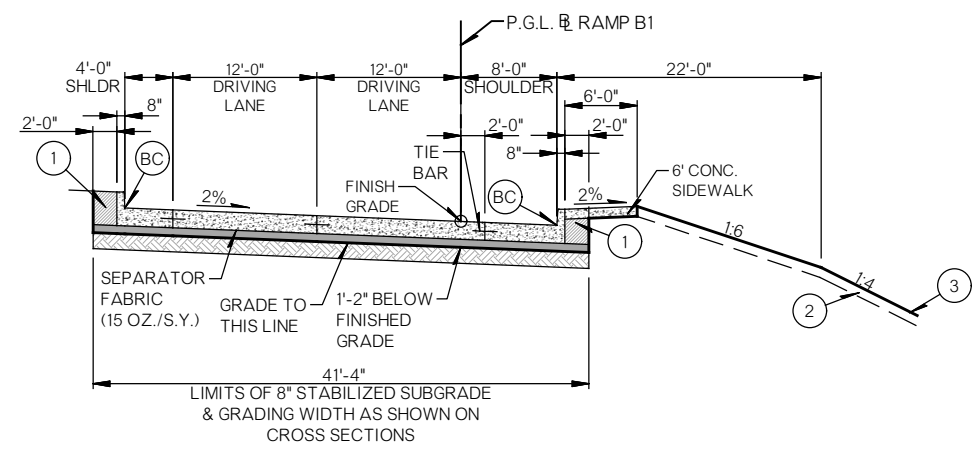
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES	
SURFACE COURSE	10" P.C. CONCRETE	
BASE COURSE	4" CEMENT TREATED BASE	

TYPICAL SECTION



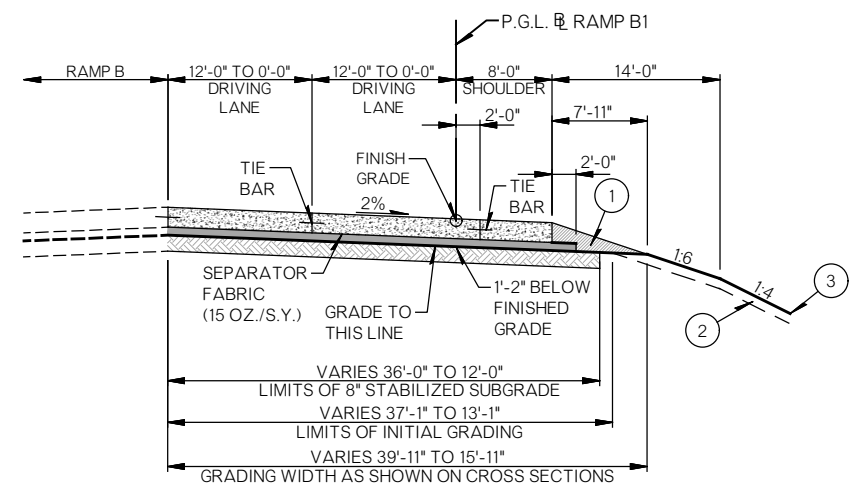
TYPICAL SECTION NO. 40
RAMP B1
STA. 341+90.71 TO STA. 342+66.46

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 41
RAMP B1
STA. 342+66.46 TO STA. 344+79.13

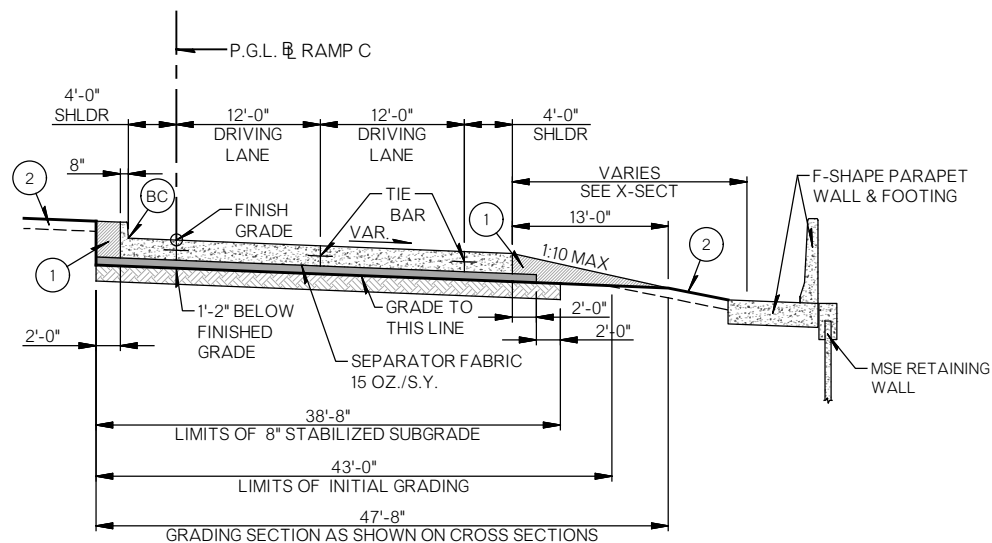
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 42
RAMP B1
STA. 344+98.30 TO STA. 345+83.76

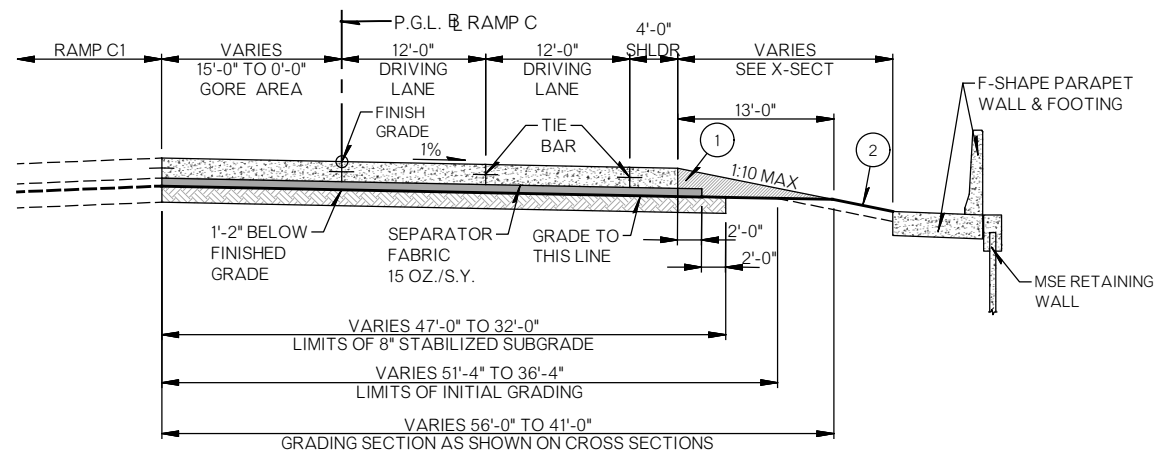
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- BC CONCRETE CURB (8" BARRIER-INTEGRAL)



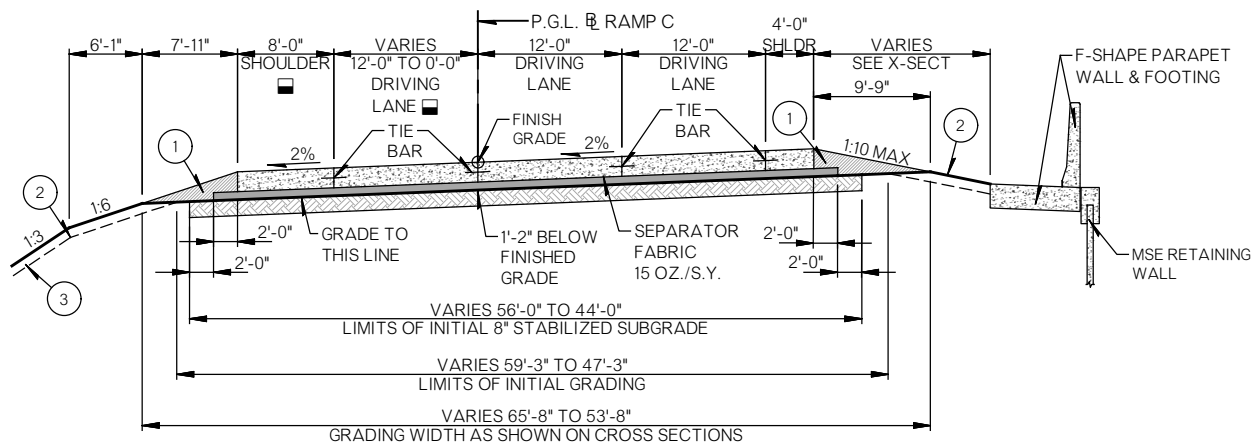
TYPICAL SECTION NO. 43
RAMP C
STA. 342+16.47 TO STA. 342+89.92

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 44
RAMP C
STA. 342+89.92 TO STA. 344+71.68

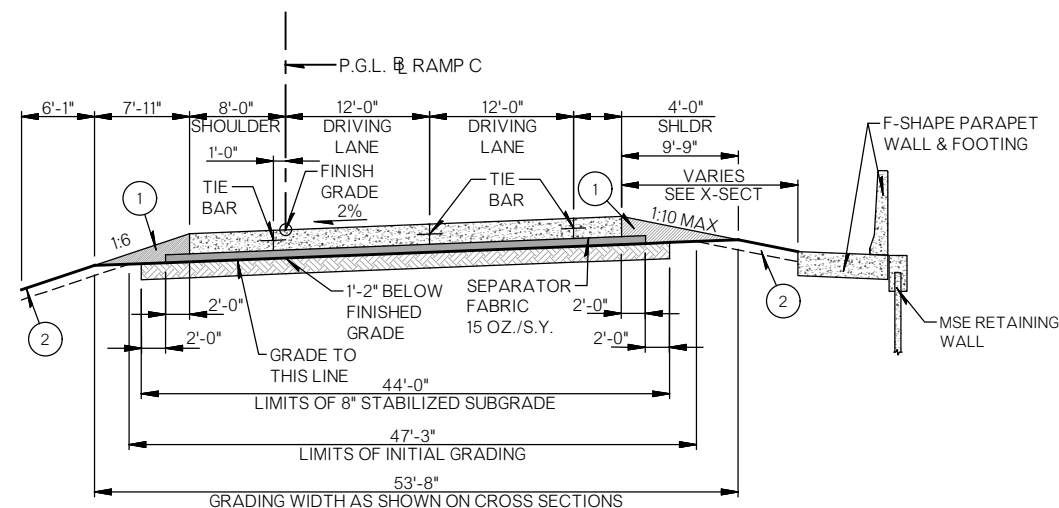
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 45
RAMP C
STA. 344+71.68 TO STA. 345+91.68

DRIVING LANE AND SHOULDER BEGIN FULL WIDTH AT STA. 344+72.07. DRIVING LANE TAPERS TO 0'-0" AT STA. 345+91.68, SHOULDER REMAINS 8'-0".

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

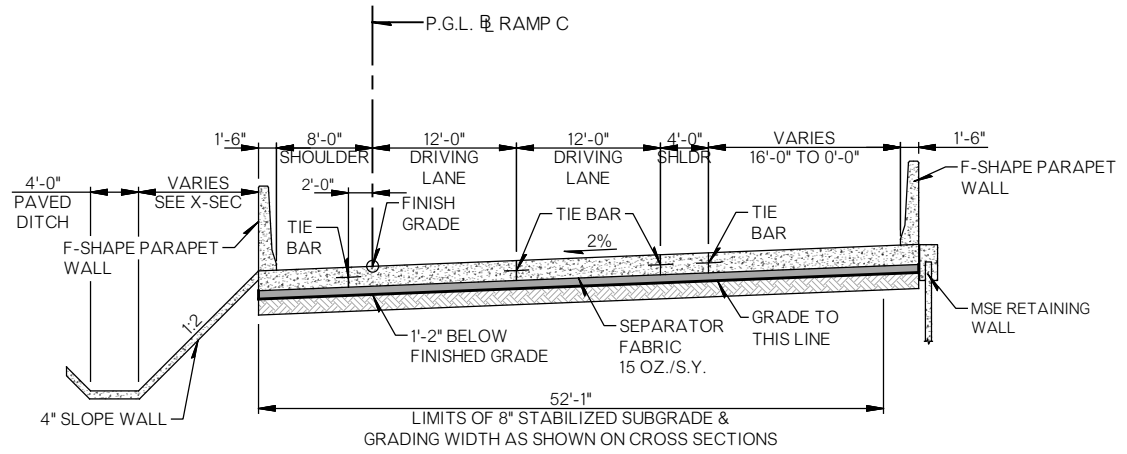


TYPICAL SECTION NO. 46
RAMP C
STA. 345+91.68 TO STA. 347+26.32

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

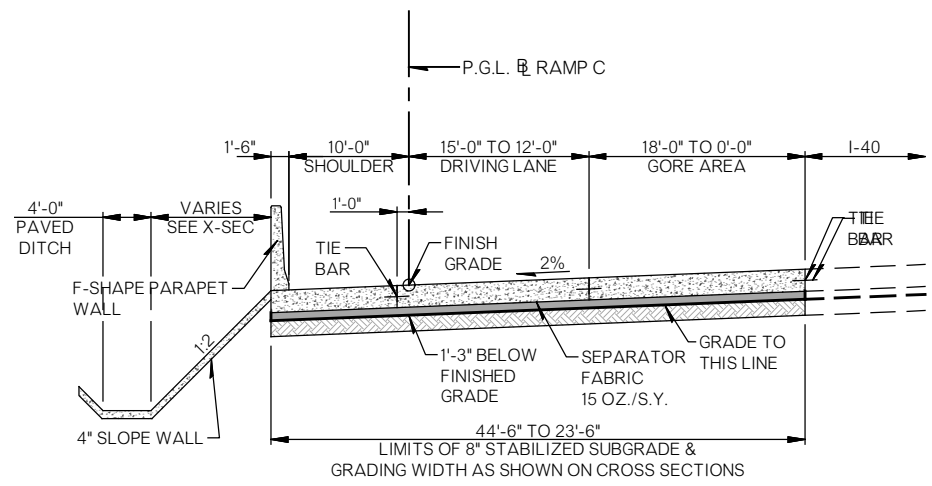
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- BC CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



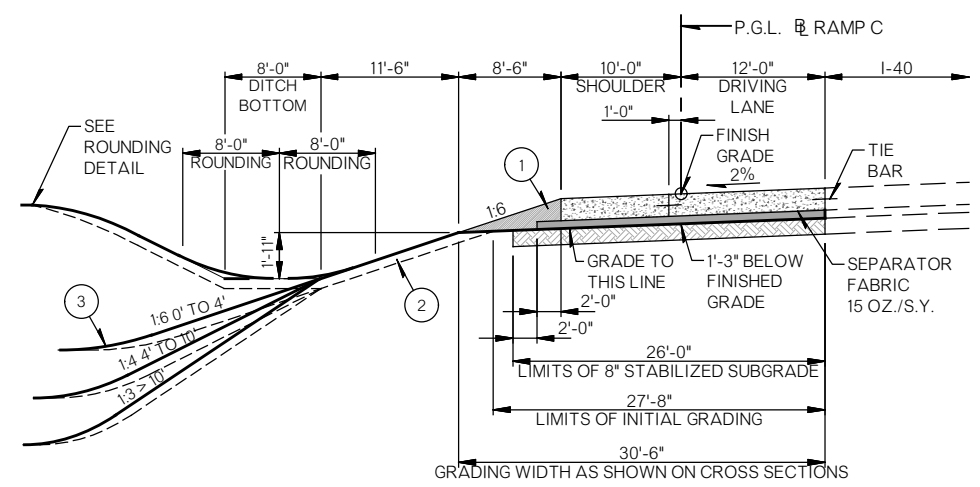
TYPICAL SECTION NO. 47
RAMP C
STA. 347+26.32 TO STA. 349+90.73

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" & 15'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



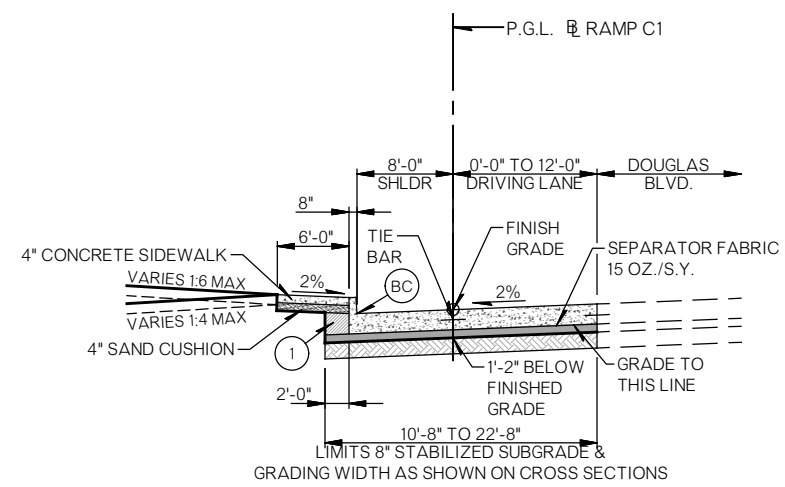
TYPICAL SECTION NO. 48
RAMP C
STA. 349+90.73 TO STA. 357+00.00

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	10'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 49
RAMP C
STA. 357+00.00 TO STA. 365+00.00

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANE	10'-0" SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

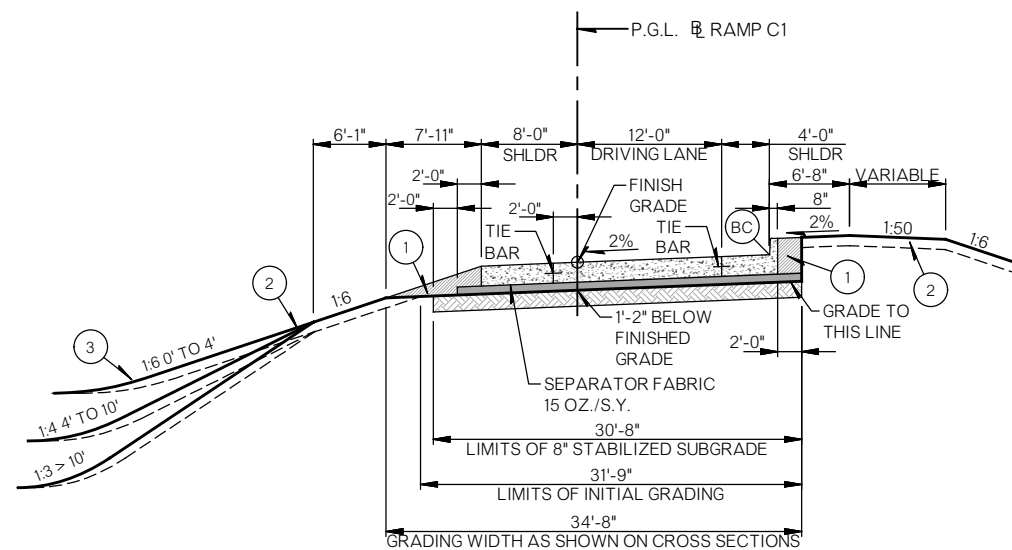


TYPICAL SECTION NO. 50
RAMP C1
STA. 340+17.31 TO STA. 341+11.82

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	17'-0" DRIVING LANE	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

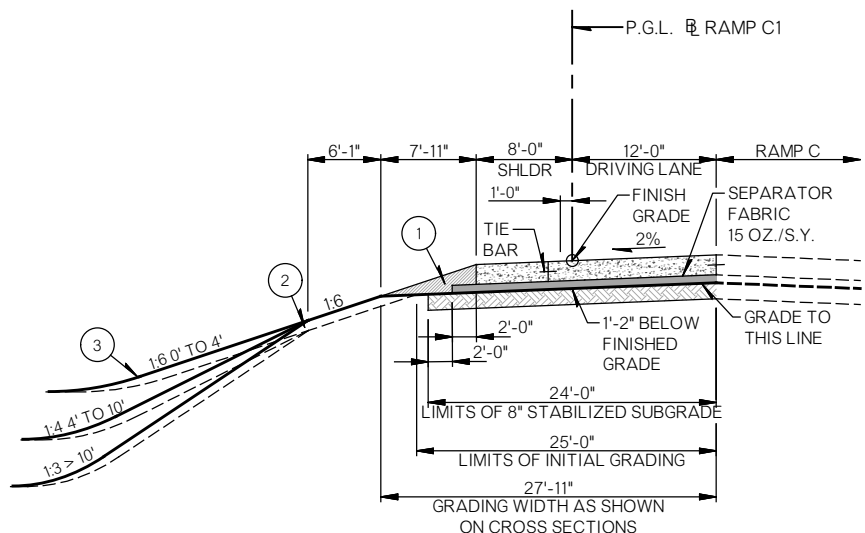
- (1) SEE BACKFILL NOTE SHEET NO. 0004.
- (2) SEE TOPSOIL SHEET NO. 0004.
- (3) SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



TYPICAL SECTION NO. 51
RAMP C1
STA. 341+11.82 TO STA. 342+88.54

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	15'-0" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 52
RAMP C1
STA. 342+88.54 TO STA. 344+71.68

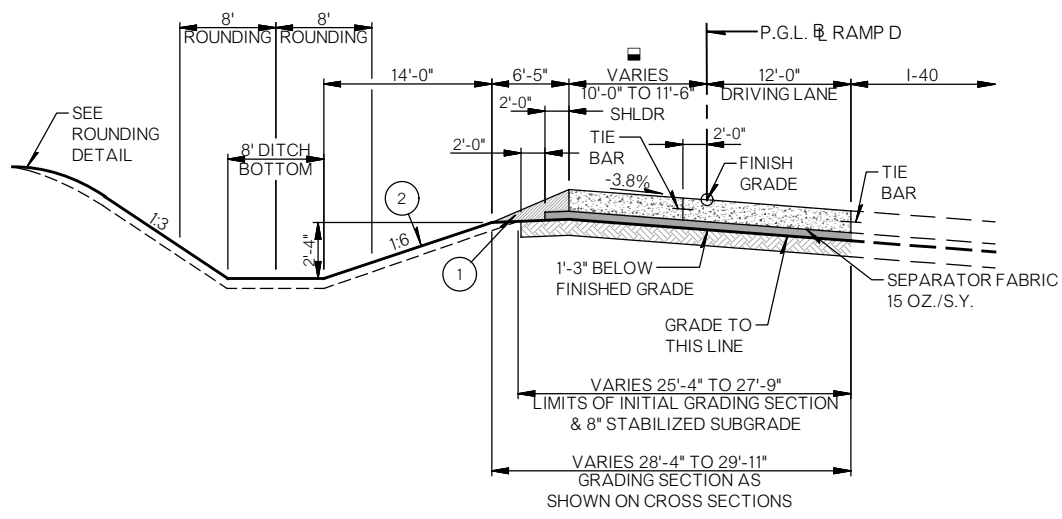
PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANE	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- BC CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION

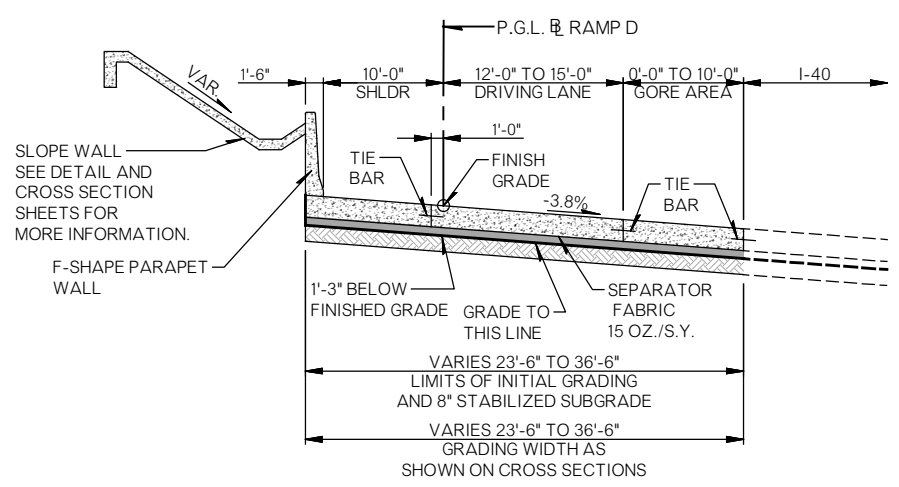
State Job No. 28992(04) Sheet No. 0022

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



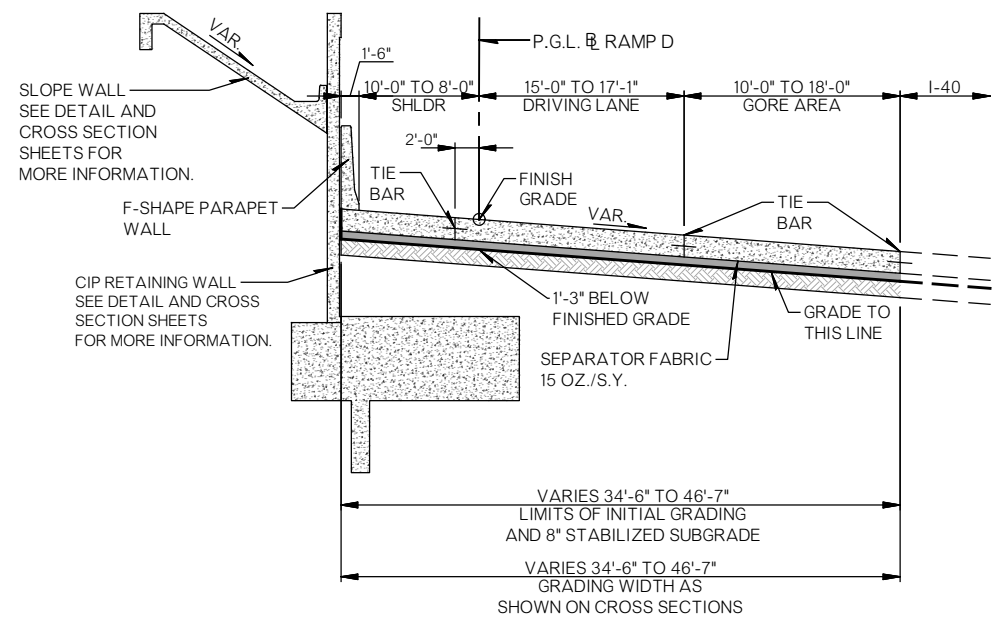
TYPICAL SECTION NO. 53
RAMP D
STA. 319+09.91 TO STA. 323+20.00 ■ VARIES FROM STA. 323+10 TO STA. 323+20

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" DRIVING LANE	SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



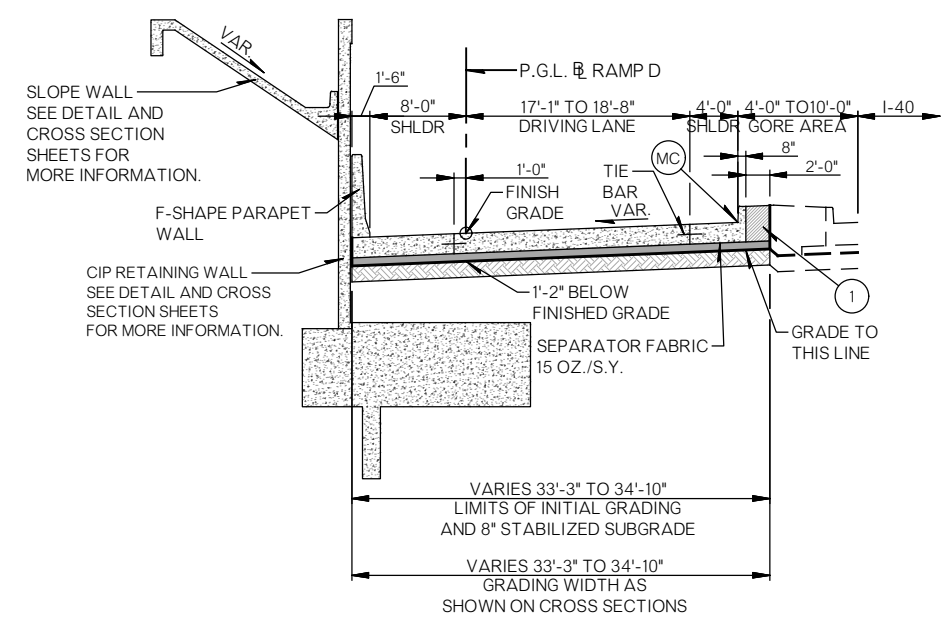
TYPICAL SECTION NO. 54
RAMP D
STA. 323+20.00 TO STA. 326+26.07

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" TO 15'-0" DRIVING LANE	SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 55
RAMP D
STA. 326+26.07 TO STA. 327+27.08

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	SHOULDER
SURFACE COURSE	11" DOWEL JOINTED P.C. CONCRETE	11" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

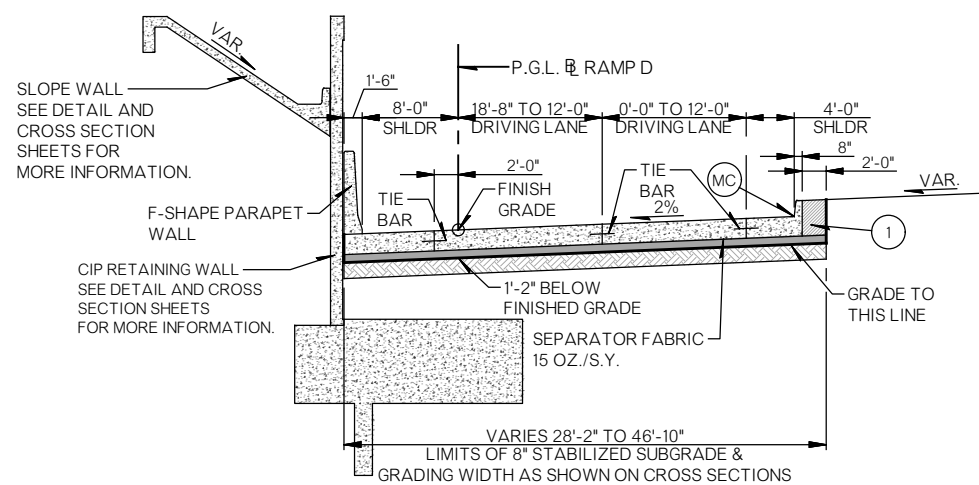


TYPICAL SECTION NO. 56
RAMP D
STA. 327+27.08 TO STA. 328+21.93

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	18'-8" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

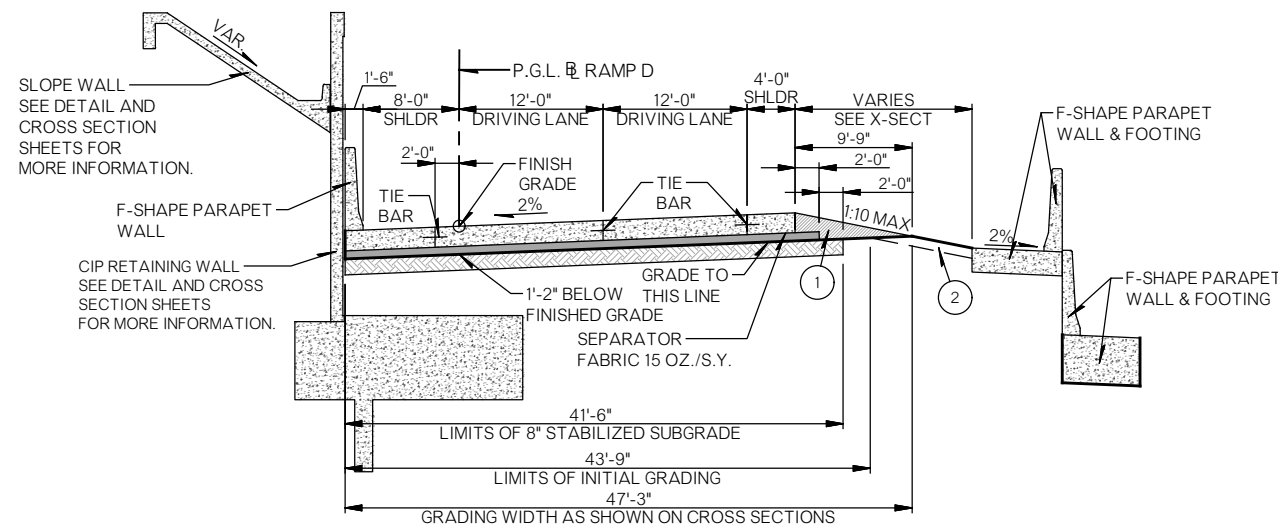
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (MC) CONCRETE CURB (4" BARRIER-INTEGRAL)

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



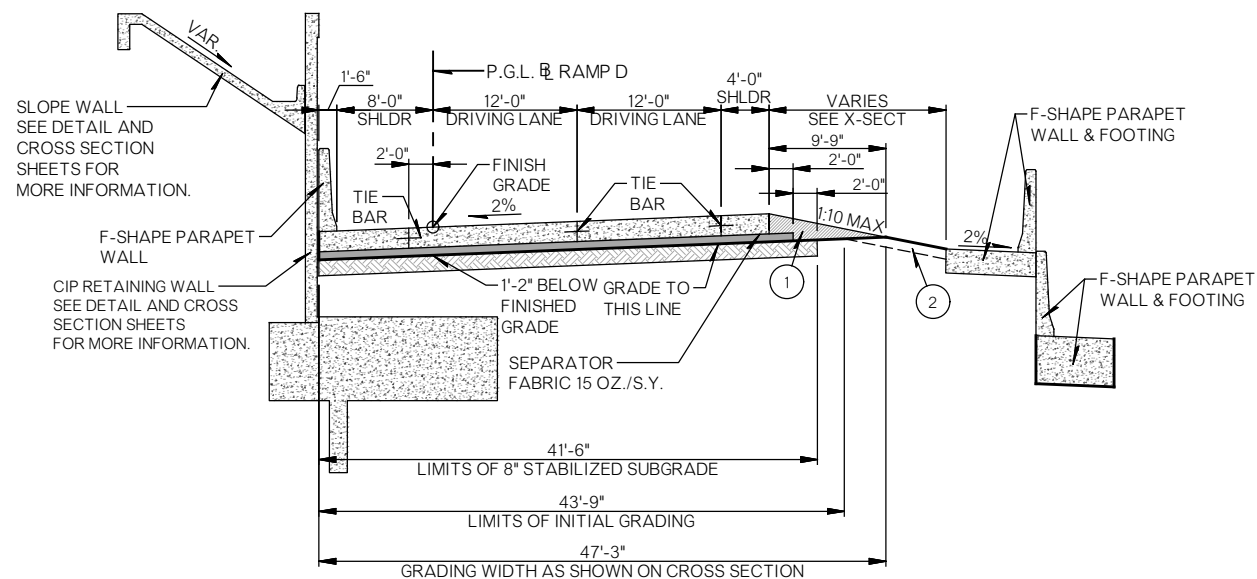
TYPICAL SECTION NO. 57
RAMP D
STA. 328+21.93 TO STA. 331+71.75

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	18'-8" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



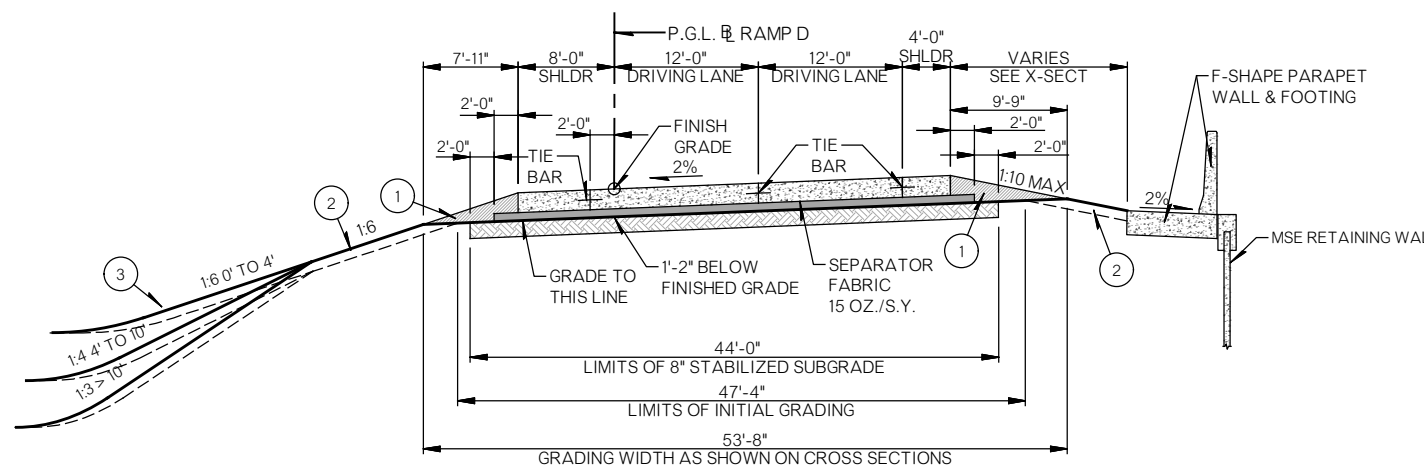
TYPICAL SECTION NO. 58
RAMP D
STA. 331+71.75 TO STA. 334+51.07

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	18'-8" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 59
RAMP D
STA. 334+51.07 TO STA. 335+00.87

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	18'-8" DRIVING LANE	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

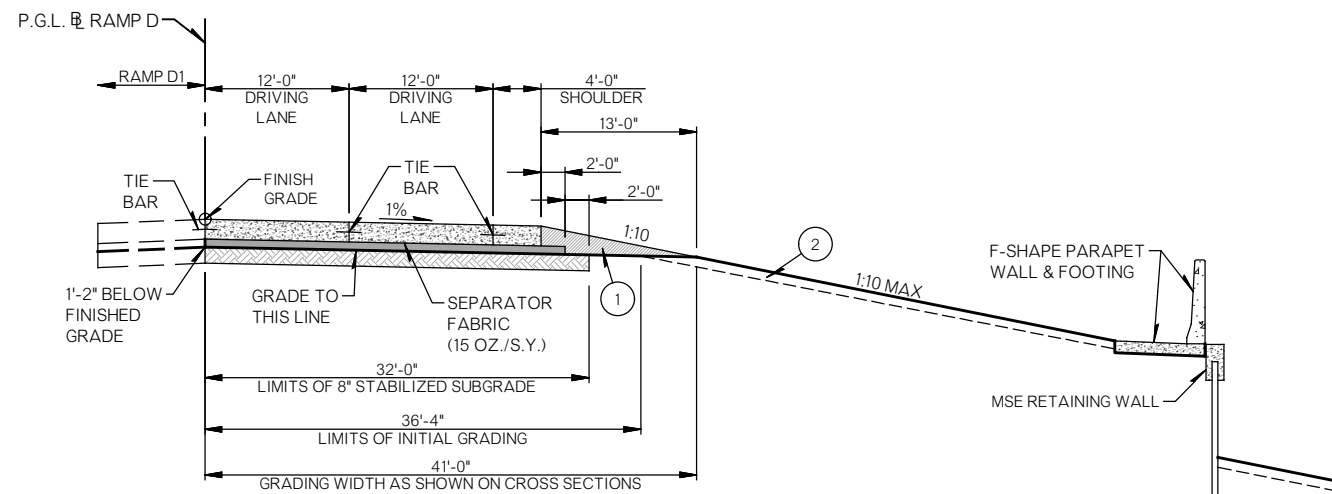


TYPICAL SECTION NO. 60
RAMP D
STA. 335+00.87 TO STA. 337+23.89

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

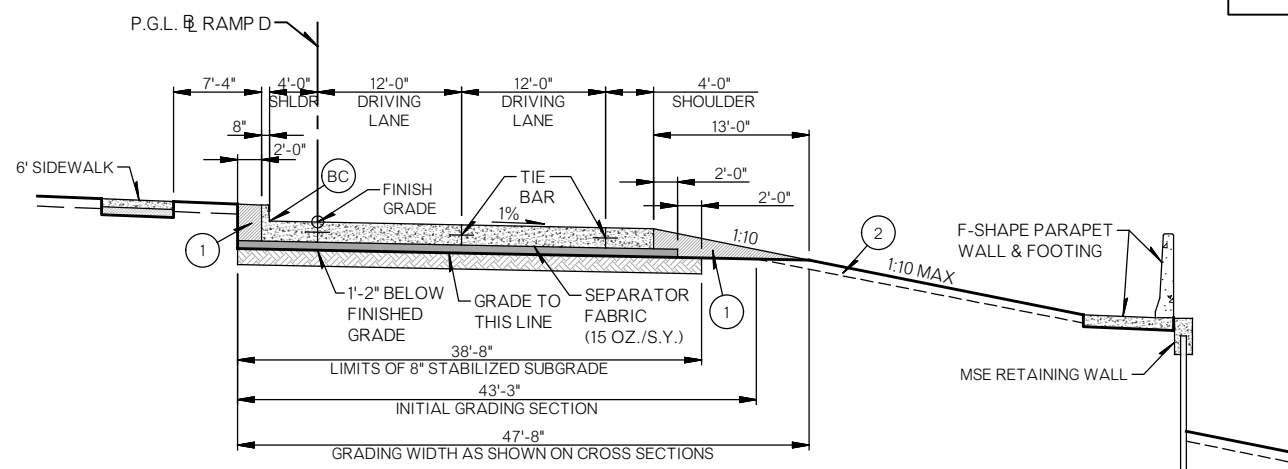
- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



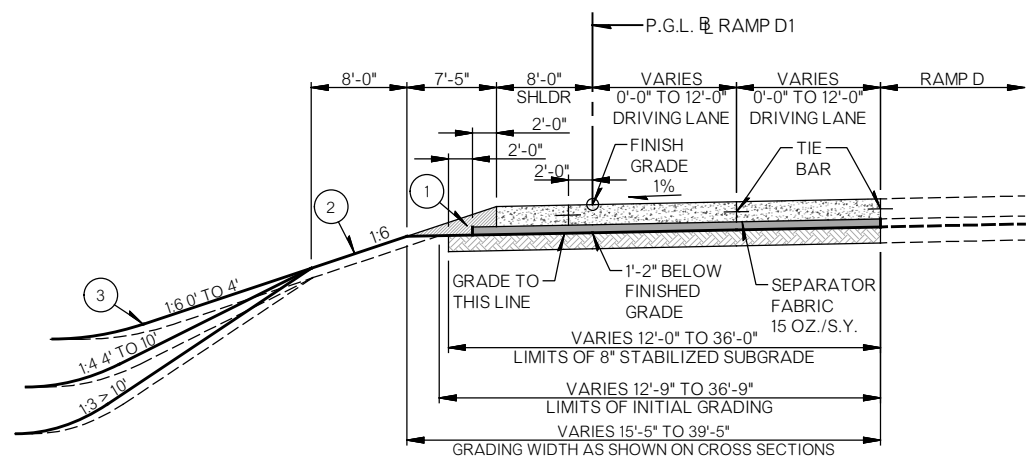
TYPICAL SECTION NO. 61
RAMP D
STA. 337+23.89 TO STA. 338+36.49

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	4'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



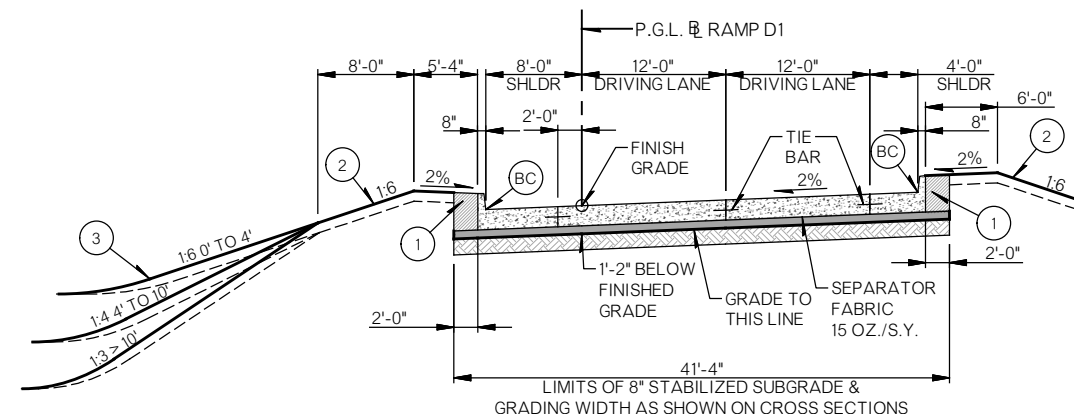
TYPICAL SECTION NO. 62
RAMP D
STA. 338+36.49 TO STA. 340+26.01

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	4'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE



TYPICAL SECTION NO. 63
RAMP D1
STA. 337+23.89 TO STA. 338+07.43

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

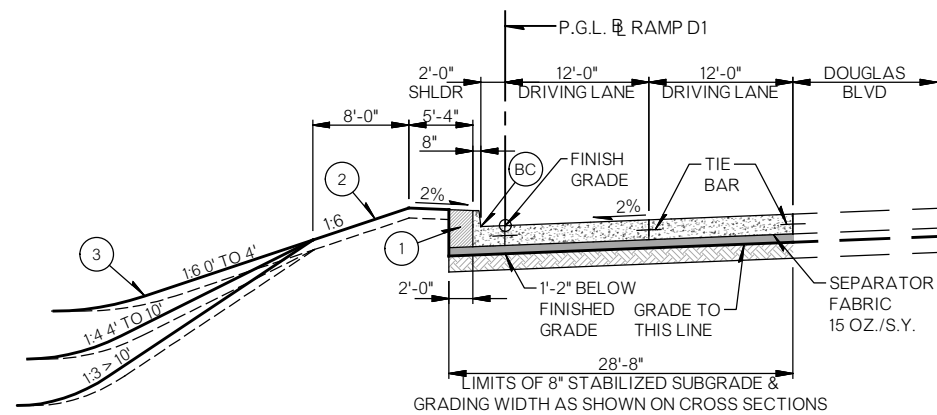


TYPICAL SECTION NO. 64
RAMP D1
STA. 338+26.49 TO STA. 340+35.63

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	12'-0" & 14'-0" DRIVING LANES	4'-0" & 8'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

TYPICAL SECTION



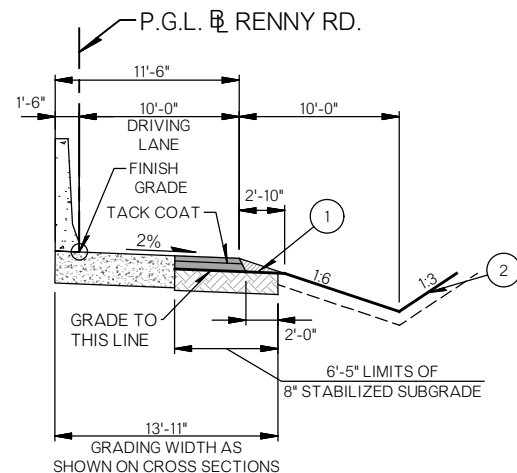
TYPICAL SECTION NO. 65
RAMP D1
STA. 341+11.37 TO STA. 342+45.40

PAVEMENT REQUIREMENTS		
PAVEMENT STRUCTURE	2 - 12'-0" DRIVING LANES	2'-0" SHOULDER
SURFACE COURSE	10" DOWEL JOINTED P.C. CONCRETE	10" P.C. CONCRETE
BASE COURSE	4" CEMENT TREATED BASE	4" CEMENT TREATED BASE

- ① SEE BACKFILL NOTE SHEET NO. 0004.
- ② SEE TOPSOIL SHEET NO. 0004.
- ③ SEE DISTANCE MEASURED NOTE SHEET NO. 0004.
- (BC) CONCRETE CURB (8" BARRIER-INTEGRAL)

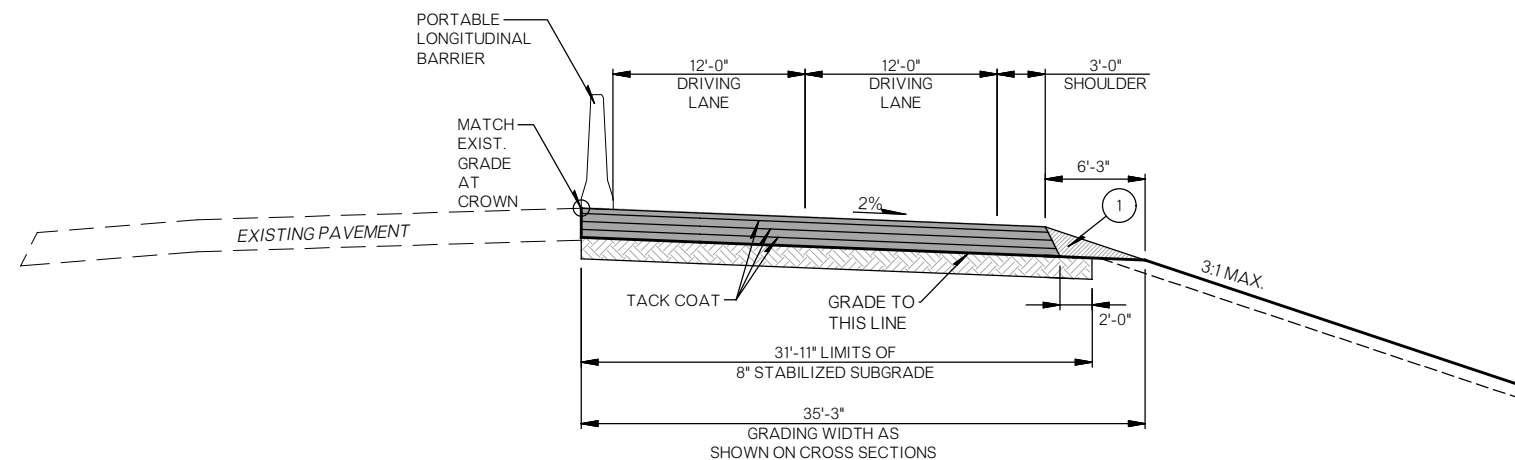
TYPICAL SECTION

State Job No. 28992(04) Sheet No. 0026



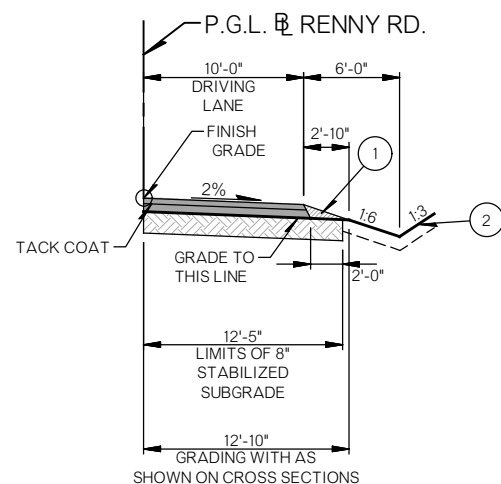
TYPICAL SECTION NO. 66
RENNY RD.
STA. 1+86.61 TO STA. 7+42.96

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	10'-0" DRIVING LANES
SURFACE COURSE	2" SUPERPAVE TYPE S4 (64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (62-22 OK)



TYPICAL SECTION NO. 68
DETOURS

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	12'-0" DRIVING LANES & 3'-0" SHOULDER
SURFACE COURSE	2" SUPERPAVE TYPE S4 (PG 76-28 OK)
	3" SUPERPAVE TYPE S3 (PG 76-28 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (PG 64-22 OK)
	3" SUPERPAVE TYPE S3 (PG 64-22 OK)



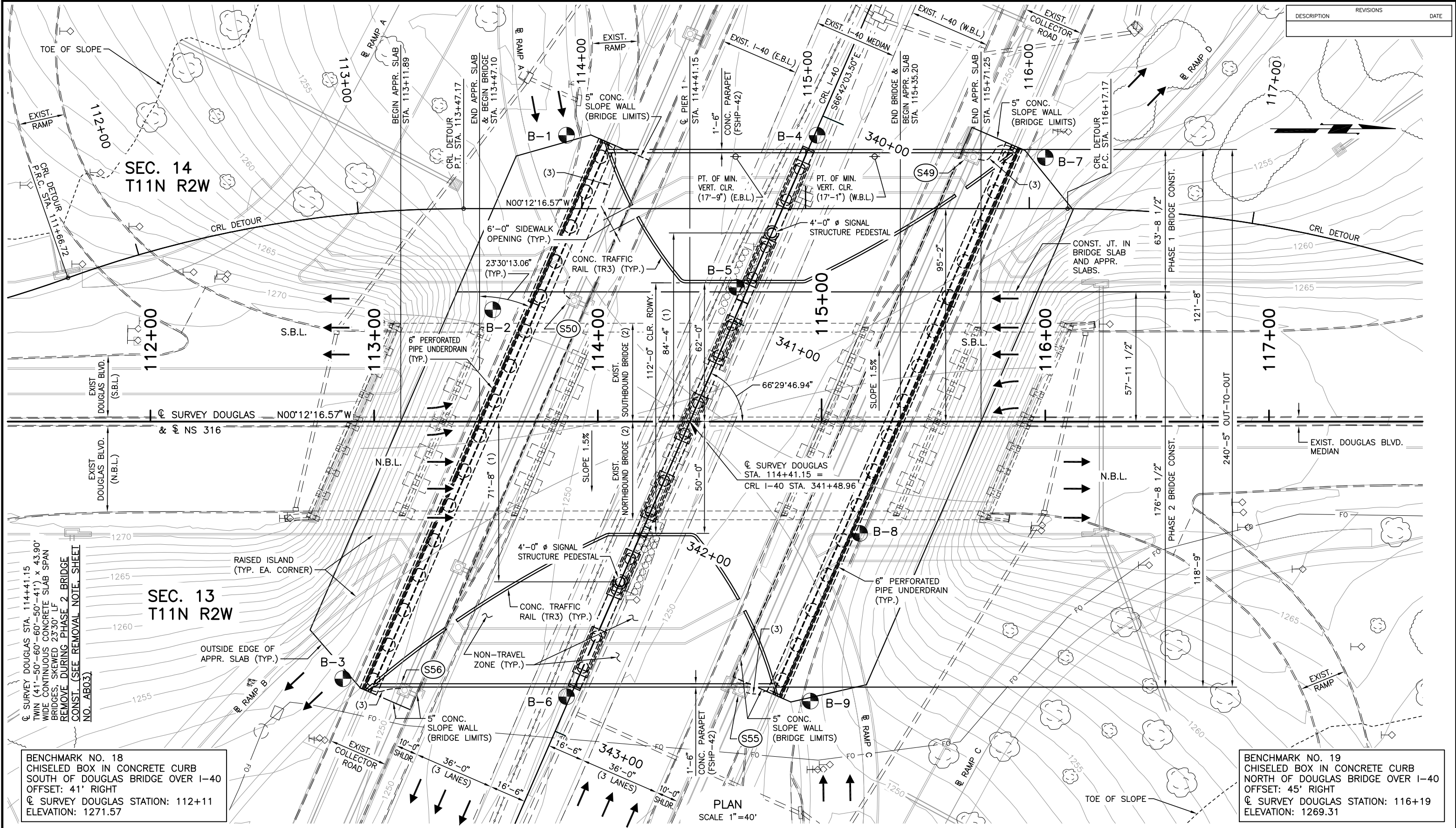
TYPICAL SECTION NO. 67
RENNY RD.
STA. 10+80.94 TO STA. 11+42.97
STA. 12+92.97 TO STA. 19+71.25

PAVEMENT REQUIREMENTS	
PAVEMENT STRUCTURE	10'-0" DRIVING LANES
SURFACE COURSE	2" SUPERPAVE TYPE S4 (64-22 OK)
BASE COURSE	3" SUPERPAVE TYPE S3 (62-22 OK)

- 1 SEE BACKFILL NOTE SHEET NO. 0004.
- 2 SEE TOPSOIL SHEET NO. 0004.
- 3 SEE DISTANCE MEASURED NOTE SHEET NO. 0004.

TYPICAL SECTION

DESCRIPTION	REVISIONS	DATE



BENCHMARK NO. 18
 CHISELED BOX IN CONCRETE CURB
 SOUTH OF DOUGLAS BRIDGE OVER I-40
 OFFSET: 41' RIGHT
 ☉ SURVEY DOUGLAS STATION: 112+11
 ELEVATION: 1271.57

BENCHMARK NO. 19
 CHISELED BOX IN CONCRETE CURB
 NORTH OF DOUGLAS BRIDGE OVER I-40
 OFFSET: 45' RIGHT
 ☉ SURVEY DOUGLAS STATION: 116+19
 ELEVATION: 1269.31

PLAN
 SCALE 1"=40'

NOTES: ALL BRIDGE AND APPROACH SLAB STATIONING
 FOLLOWS ☉ SURVEY DOUGLAS.
 FOR BRIDGE ELEVATION, SEE SHEET NO. B002.

SEE SHEET NO. B003 FOR DESIGN DATA, FINISH
 GRADE DATA, FOUNDATION DATA, VERTICAL CLEARANCE
 SIGN DETAILS, SUMMARY OF QUANTITIES, INDEX OF
 SHEETS AND EXIST. BRIDGE NOTE.

FOR BRIDGE CONSTRUCTION PHASING PLANS AND
 CROSS-SECTIONS, SEE SHEET NOS. B004-B006.
 SEE ROADWAY PLANS FOR PRES. AND NEW R/W,
 AND GEOMETRIC DATA.

FOR FOUNDATION REPORTS, SEE SHEET NOS.
 B007-B009.

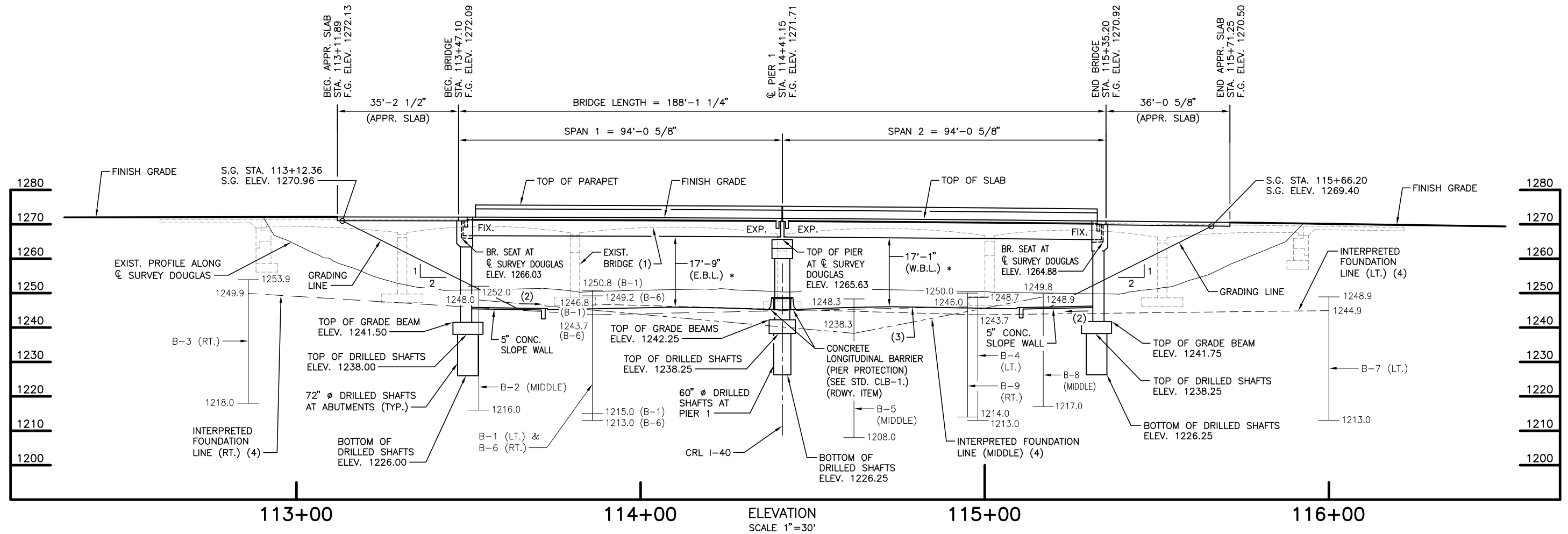
- (1) DIMENSION IS FROM ☉ SURVEY DOUGLAS TO
 ☉ 4'-0" Ø SIGNAL STRUCTURE PEDESTAL.
- (2) REMOVE DURING PHASE 2 BRIDGE CONSTRUCTION.
- (3) 6" NON-PERFORATED PIPE UNDERDRAIN.

Design	.	
Drawn	PKW	01/18
Checked	.	
Approved	.	
Squad		

OKLAHOMA COUNTY
 BRIDGE "B"
 I-40/DOUGLAS BOULEVARD INTERCHANGE
GENERAL PLAN AND ELEVATION (1 OF 3)
 CONST. 94'-94' TYPE IV P.C. BEAM W/ 112'-0" CLR. RDWY.,
 CONC. PARAPETS (FSHP-42) AND CONC. TRAFFIC RAILS (TR3),
 SKEWED 23°30'13.06" LF AT ☉ STA. 114+41.15
 Job Piece No. 28992(04) Sheet No. B001

"PRELIMINARY PLANS - NOT FOR CONSTRUCTION"

DESCRIPTION	REVISIONS	DATE



BENCHMARK NO. 18
 CHISELED BOX IN CONCRETE CURB
 SOUTH OF DOUGLAS BRIDGE OVER I-40
 OFFSET: 41' RIGHT
 ☉ SURVEY DOUGLAS STATION: 112+11
 ELEVATION: 1271.57

BENCHMARK NO. 19
 CHISELED BOX IN CONCRETE CURB
 NORTH OF DOUGLAS BRIDGE OVER I-40
 OFFSET: 45' RIGHT
 ☉ SURVEY DOUGLAS STATION: 116+19
 ELEVATION: 1269.31

* MINIMUM THEORETICAL VERTICAL CLEARANCE. (SEE SHEET NO. B001 FOR LOCATIONS AND SHEET NO. B003 FOR SIGNAGE DETAILS AND NOTES.)

- (1) REMOVE DURING PHASE 2 BRIDGE CONSTRUCTION.
- (2) SLOPE WALL SLOPE = 2% (PERP. TO ABUTMENTS).
- (3) NEW PROFILE ALONG ☉ SURVEY DOUGLAS.
- (4) FOR ESTIMATION PURPOSES ONLY.

NOTES: ALL STATIONING FOLLOWS ☉ SURVEY DOUGLAS UNLESS NOTED OR SHOWN OTHERWISE.

FOR PLAN VIEW, SEE SHEET NO. B001.

SEE SHEET NO. B003 FOR DESIGN DATA, FINISH GRADE DATA, FOUNDATION DATA, VERTICAL CLEARANCE SIGN DETAILS, SUMMARY OF QUANTITIES, INDEX OF SHEETS AND EXIST. BRIDGE NOTE.

FOR FOUNDATION REPORTS, SEE SHEET NOS. B007-B009.

FOR BRIDGE CONSTRUCTION PHASING PLANS AND CROSS-SECTIONS, SEE SHEET NOS. B004-B006.

Design	.		BRIDGE "B"	OKLAHOMA COUNTY
Drawn	PKW	01/18	I-40/DOUGLAS BOULEVARD INTERCHANGE	
Checked	.		GENERAL PLAN AND ELEVATION (2 OF 3)	
Approved	.		CONST. 94'-94' TYPE IV P.C. BEAM W/ 112'-0" CLR. RDWY., CONC. PARAPETS (FSHP-42) AND CONC. TRAFFIC RAILS (TR3), SKEWED 23'30"13.06" LF AT ☉ STA. 114+41.15	
Squad			Job Piece No. 28992(04)	Sheet No. B002

"PRELIMINARY PLANS - NOT FOR CONSTRUCTION"

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DESCRIPTION	REVISIONS	DATE

DESIGN DATA (LOAD AND RESISTANCE FACTOR DESIGN)

CLASS "AA" CONCRETE $f'_c = 4,000$ PSI
 CLASS "A" CONCRETE $f'_c = 3,000$ PSI
 REINFORCING STEEL (GRADE 60) $f_y = 60,000$ PSI
 STRUCTURAL STEEL M270 (Gr. 50W) $f_y = 50,000$ PSI
 STAINLESS STEEL A240 (TYPE 316) $f_y = 30,000$ PSI

LOADING: HL-93 OR OKLAHOMA OVERLOAD TRUCK
 20 PSF FUTURE WEARING SURFACE
 5 PSF STAY-IN-PLACE FORMS
 200 PSF NON-STRUCTURAL ATTACHMENTS (NON-TRAVEL ZONES)

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.
 ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.
 STAINLESS STEEL WELDING CODE.

LRFR INVENTORY RATING FACTOR: 1.49
 LFD OPERATING RATING: HS 58

FOUNDATION DATA

ABUTMENTS (72" DIAMETER DRILLED SHAFTS)	ABUT. 1	ABUT. 2
MINIMUM DEPTH INTO ROCK (FT.)	= 12.0	12.0
DEPTH OF ROCK NEGLECTED FOR FRICTION (FT.)	= 6.0	6.0
UNIT BEARING RESISTANCE (TSF)	= 25.4	25.4
BEARING RESISTANCE FACTOR	= 0.7	0.7
FACTORED BEARING RESISTANCE (TONS/SHAFT)	= 502.7	502.7
UNIT FRICTION RESISTANCE (TSF)	= 8.6	8.6
FRICTION RESISTANCE FACTOR	= 0.45	0.45
FACTORED FRICTION RESISTANCE (TONS/SHAFT)	= 437.6	437.6
TOTAL FACTORED RESISTANCE (TONS/SHAFT)	= 940.3	940.3
TOTAL FACTORED REACTION (TONS/SHAFT)	= 484.5	484.5

PIER (60" DIAMETER DRILLED SHAFTS)	PIER 1
MINIMUM DEPTH INTO ROCK (FT.)	= 12.0
DEPTH OF ROCK NEGLECTED FOR FRICTION (FT.)	= 5.0
UNIT BEARING RESISTANCE (TSF)	= 25.4
BEARING RESISTANCE FACTOR	= 0.7
FACTORED BEARING RESISTANCE (TONS/SHAFT)	= 349.1
UNIT FRICTION RESISTANCE (TSF)	= 8.6
FRICTION RESISTANCE FACTOR	= 0.45
FACTORED FRICTION RESISTANCE (TONS/SHAFT)	= 425.5
TOTAL FACTORED RESISTANCE (TONS/SHAFT)	= 774.6
TOTAL FACTORED REACTION (TONS/SHAFT)	= 613.9

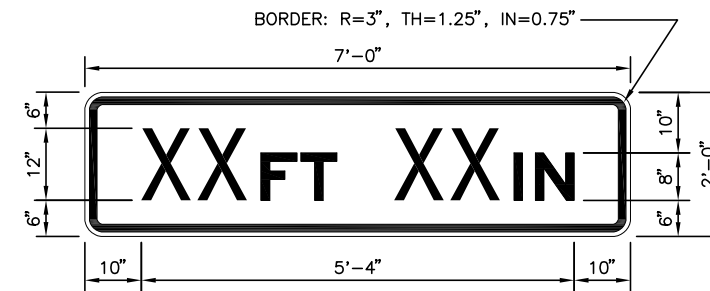
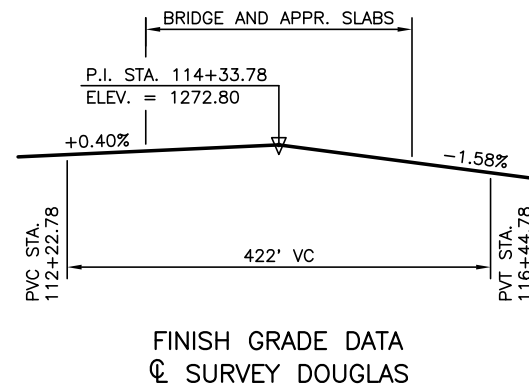
SUMMARY OF QUANTITIES (BRIDGE "B")							
DESCRIPTION	UNITS	ABUTS.	PIER	SUPSTR.	APPR. SLABS	SLOPE WALLS	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	CY	1.00	1.00				1.00
SUBSTRUCTURE EXCAVATION ROCK	CY	1.00	1.00				1.00
CLSM BACKFILL	CY	1.00					1.00
PRESTRESSED CONCRETE BEAMS (TYPE IV)	LF			1.00			1.00
APPROACH SLAB	SY				1.00		1.00
SAW-CUT GROOVING	SY			1.00	1.00		1.00
SEALED EXPANSION JOINT	LF			1.00			1.00
CONCRETE RAIL (TR3)	LF			1.00			1.00
42" F-SHAPED PARAPET	LF			1.00			1.00
STRUCTURAL STEEL	LB			1.00			1.00
STAINLESS STEEL FIXED BEARING ASSEMBLY	EA			1.00			1.00
STAINLESS STEEL EXPANSION BEARING ASSEMBLY	EA			1.00			1.00
CLASS AA CONCRETE	CY			1.00			1.00
CLASS A CONCRETE	CY	1.00	1.00				1.00
SLOPE WALL (5")	SY					1.00	1.00
REINFORCING STEEL	LB	1.00	1.00				1.00
EPOXY COATED REINFORCING STEEL	LB	1.00	1.00	1.00			1.00
TEMPORARY SHEET PILING	LSUM						1.00
WATER REPELLENT (VISUALLY INSPECTED)	SY	1.00	1.00	1.00			1.00
DRILLED SHAFTS 60" DIAMETER	LF		1.00				1.00
DRILLED SHAFTS 72" DIAMETER	LF	1.00					1.00
CROSSHOLE SONIC LOGGING	EA	1.00	1.00				1.00
SEALER CRACK PREPARATION	LF			1.00			1.00
SEALER RESIN	GAL			1.00			1.00
6" PERFORATED PIPE UNDERDRAIN ROUND	LF	1.00					1.00
6" NON-PERF. PIPE UNDERDRAIN RND.	LF	1.00					1.00
REMOVAL OF EXISTING BRIDGE STRUCTURE	LSUM						1.00

INDEX OF SHEETS (BRIDGE "B")

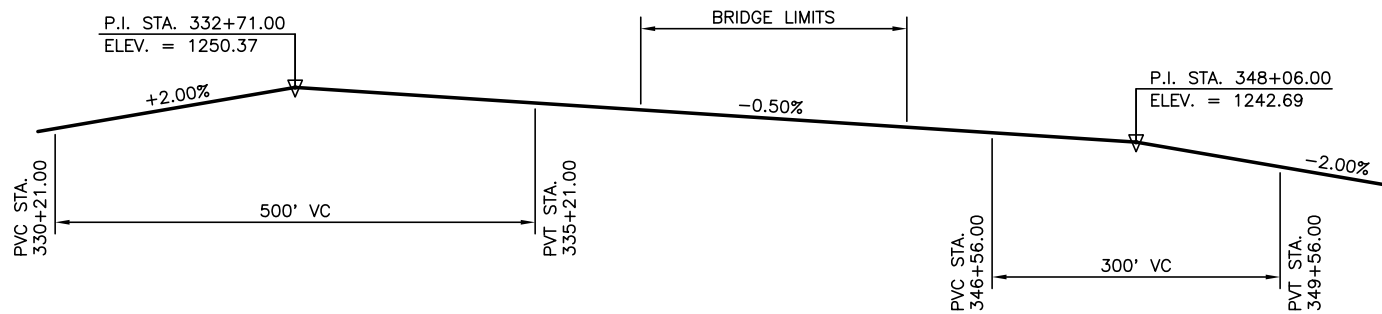
SHEET NO.	TITLE
AB02	PAY QUANTITIES
AB03	GENERAL NOTES
B001-B003	GENERAL PLAN AND ELEVATION
B004	BRIDGE CONSTRUCTION CROSS SECTIONS
B005-B006	BRIDGE CONSTRUCTION LAYOUT PLAN
B007-B009	FOUNDATION REPORT
B010	SUBSTRUCTURE STAKING DIAGRAM
B011-B017	ABUTMENT 1 DETAILS
B018-B024	ABUTMENT 2 DETAILS
B025-B028	MISCELLANEOUS ABUTMENT DETAILS
B029	SUBSTRUCTURE EXCAVATION AND PIPE UNDERDRAIN ASSEMBLY DETAILS
B030-B036	PIER 1 DETAILS
B037-B038	TYPICAL SECTION
B039-B040	LONGITUDINAL SECTION
B041	BEARING DETAILS
B042-B044	DIAPHRAGM DETAILS
B045-B047	BOTTOM SLAB REINFORCING PLAN
B048-B050	TOP SLAB REINFORCING PLAN AND PARAPET LAYOUT
B051-B057	MISCELLANEOUS SUPERSTRUCTURE DETAILS
B058	94' TYPE IV P.C. BEAM DETAILS
B059	EXPANSION JOINT DETAILS
B060-B066	APPROACH SLAB DETAILS
B067-B069	SLOPE WALL DETAILS
B070-B073	BRIDGE AESTHETICS

THE FOLLOWING STANDARDS SHALL BE REQUIRED:

TR3-2-01E	LECS-4-1
FSHP-42-2-00E	LTU-4-0
EJ-SK-04E	PUD-3-2
EJ-DTL-02E	



SIGN NUMBER	W12-2p
WIDTH x HEIGHT	7'-0" x 2'-0"
BORDER WIDTH	1.25"
CORNER RADIUS	3"
MOUNTING	BRIDGE PARAPET
BACKGROUND	TYPE: REFLECTIVE COLOR: YELLOW
LEGEND & BORDER	TYPE: REFLECTIVE COLOR: BLACK



VERTICAL CLEARANCE SIGN DETAILS

NOTES: INSTALL ONE (1) SIGN ON THE WEST PARAPET IN SPAN 1 OVER THE MIDPOINT OF I-40 (EBL) AND ONE (1) SIGN ON THE EAST PARAPET IN SPAN 2 OVER THE MIDPOINT OF I-40 (WBL).

SIGNS SHOULD INDICATE A VERTICAL CLEARANCE OF 3" MIN. LESS THAN THE FINAL MEASURED CLEARANCE. THE CONTRACTOR SHALL CONTACT ODOT DIV. 4 FOR FINAL MEASUREMENT OF VERTICAL CLEARANCES.

HARDWARE AND CONNECTION DETAILS TO THE PARAPETS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

ALL COSTS FOR FABRICATION, LABOR, MATERIALS, HARDWARE, AND INSTALLATION OF THE VERTICAL CLEARANCE SIGNS, COMPLETE-IN-PLACE, SHALL BE INCLUDED IN THE PRICE BID FOR "SHEET ALUMINUM SIGNS", PER SQ. FT. (TRAFFIC ITEM).

THE INSTALLATION OF THE PERMANENT VERTICAL CLEARANCE SIGNS DOES NOT RELIEVE THE CONTRACTOR OF MAINTAINING APPROPRIATE VERTICAL CLEARANCE SIGNS DURING CONSTRUCTION. COSTS TO BE INCLUDED IN OTHER ITEMS OF WORK.

EXISTING BRIDGE NOTE:

@ SURVEY DOUGLAS STA. 114+41.15, TWIN (41'-50'-60'-60'-50'-41') x 43.90' WIDE CONTINUOUS CONCRETE SLAB SPAN BRIDGES, SKEWED 23'30" LF.

SEE "REMOVAL OF EXISTING BRIDGE STRUCTURE" NOTE, SHEET NO. AB03. REMOVE DURING PHASE 2 BRIDGE CONSTRUCTION.

Design	.		BRIDGE "B"	OKLAHOMA COUNTY
Drawn	PKW	01/18	I-40/DOUGLAS BOULEVARD INTERCHANGE	
Checked	.		GENERAL PLAN AND ELEVATION (3 OF 3)	
Approved	.		CONST. 94'-94' TYPE IV P.C. BEAM W/ 112'-0" CLR. RDWY., CONC. PARAPETS (FSHP-42) AND CONC. TRAFFIC RAILS (TR3), SKEWED 23'30"13.06" LF AT @ STA. 114+41.15	
Squad			Job Piece No. 28992(04)	Sheet No. B003

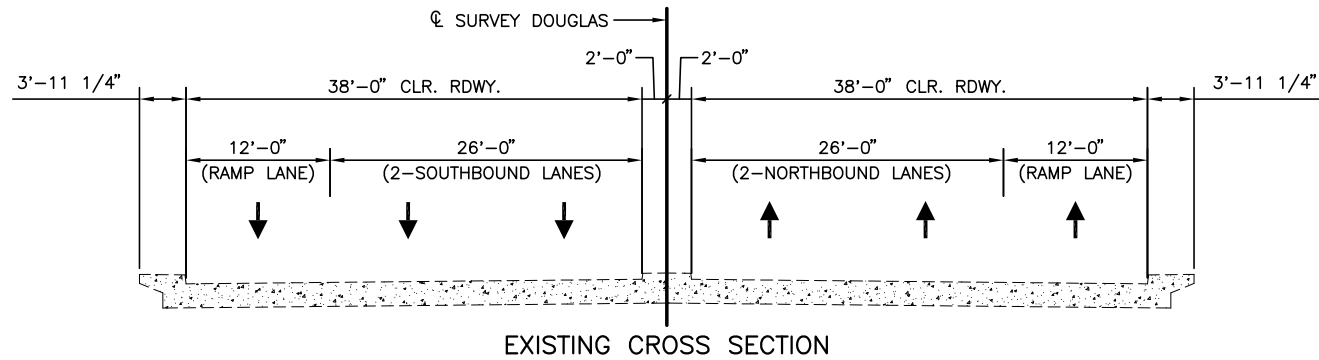
"PRELIMINARY PLANS - NOT FOR CONSTRUCTION"

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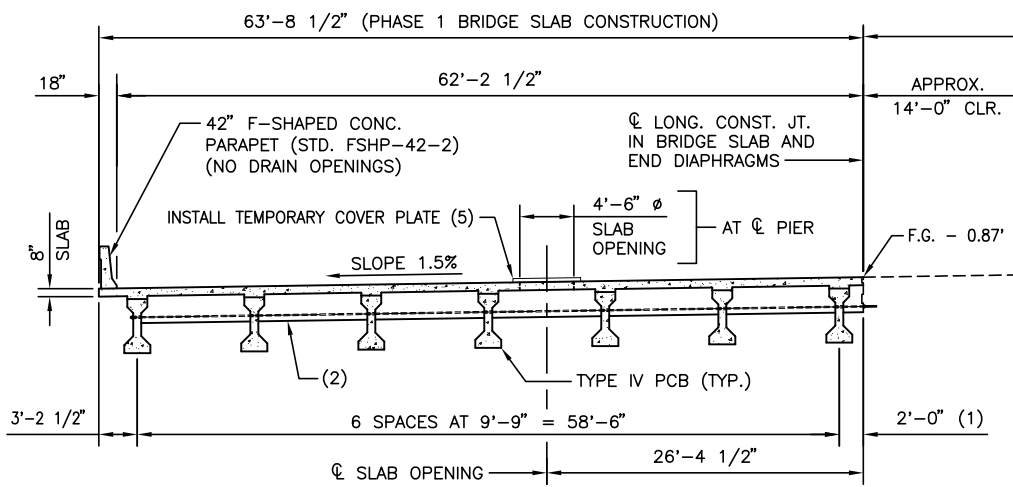
DESCRIPTION	REVISIONS	DATE

Remove

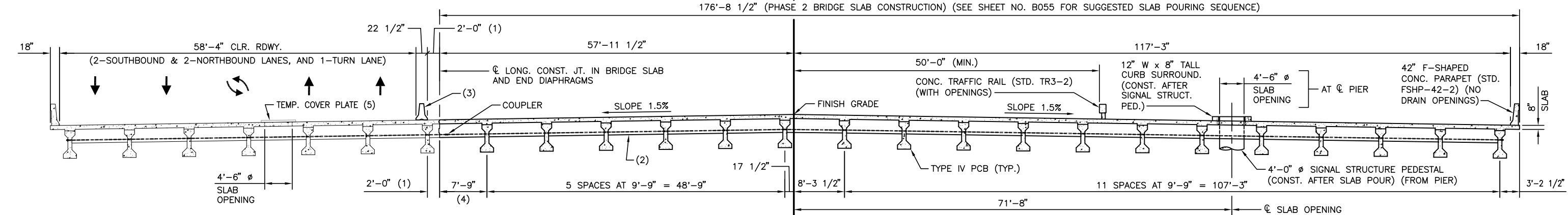
DURING PHASE 1 BRIDGE CONSTRUCTION. OPEN



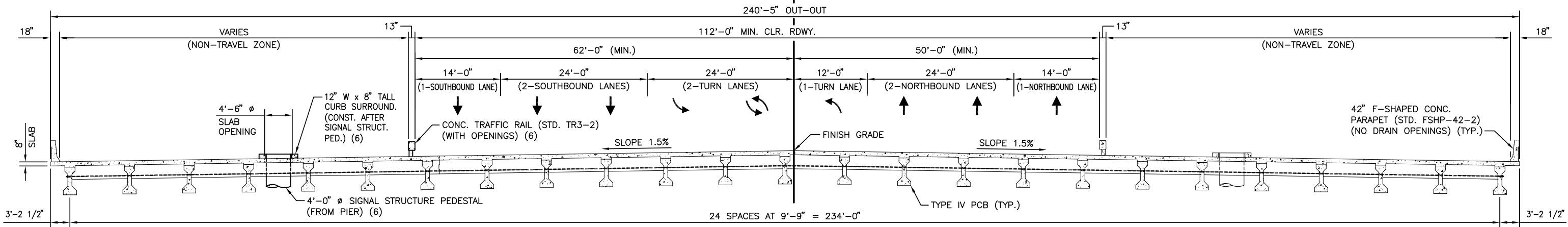
EXISTING CROSS SECTION



PHASE 1 BRIDGE CONSTRUCTION



PHASE 2 BRIDGE CONSTRUCTION



FINAL CROSS SECTION
(OPEN TO TRAFFIC)

- (1) THE FOLLOWING CONDITIONS SHALL APPLY TO THE PHASE 1 SLAB CANTILEVER AND ANY SUBSEQUENT CANTILEVERS DURING PHASE 2 BRIDGE CONSTRUCTION:
 - VEHICULAR LIVE LOAD, SLAB FINISHING MACHINE LOADS AND OTHER HEAVY CONSTRUCTION LOADS ARE PROHIBITED ON THE SLAB CANTILEVER UNTIL AFTER THE SLAB IN THE ADJACENT PHASE IS POURED AND CURED.
 - IT IS RECOMMENDED THAT THE CANTILEVER FORMWORKS FROM THE FIRST PHASE REMAIN IN PLACE TO SUPPORT THE SECOND PHASE CANTILEVER FORMWORKS ALONG THE CONSTRUCTION JOINT. FINISHING MACHINE RAIL LOADS SHALL BE TRANSFERRED THRU FORMWORKS DIRECTLY TO A BEAM.
- (2) CONCRETE END DIAPHRAGMS ARE SHOWN. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE SHEET NOS. B042 THRU B044.
- (3) PORTABLE LONGITUDINAL BARRIER (STD. TCS24-1) (TRAFFIC ITEM). CANTILEVER WAS NOT DESIGNED TO CARRY THE BARRIER LOAD. THE OUTSIDE EDGE OF THE TEMPORARY BARRIER SHALL ALIGN WITH THE CL OF THE P.C. BEAM, AS SHOWN. SEE ALSO, NOTES ON SHEET NO. B005.
- (4) SLAB CANTILEVER FORMS SHALL BE ENTIRELY SUPPORTED BY THE P.C. BEAMS. DO NOT SUPPORT THESE FORMS FROM THE PHASE 1 CANTILEVER.
- (5) CONTRACTOR SHALL PROVIDE TEMPORARY COVER PLATE FOR SLAB OPENING DURING PHASE 2 BRIDGE CONSTRUCTION. COVER PLATE SHALL BE CAPABLE OF SUPPORTING TRAFFIC LOADS AND ALLOW PROPER FUNCTION OF THE EXPANSION JOINT. COVER PLATE DESIGN AND DETAILS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. COST TO BE INCLUDED IN OTHER ITEMS.
- (6) TO BE CONSTRUCTED AFTER TRAFFIC HAS BEEN MOVED ONTO THE PHASE 2 BRIDGE SLAB.

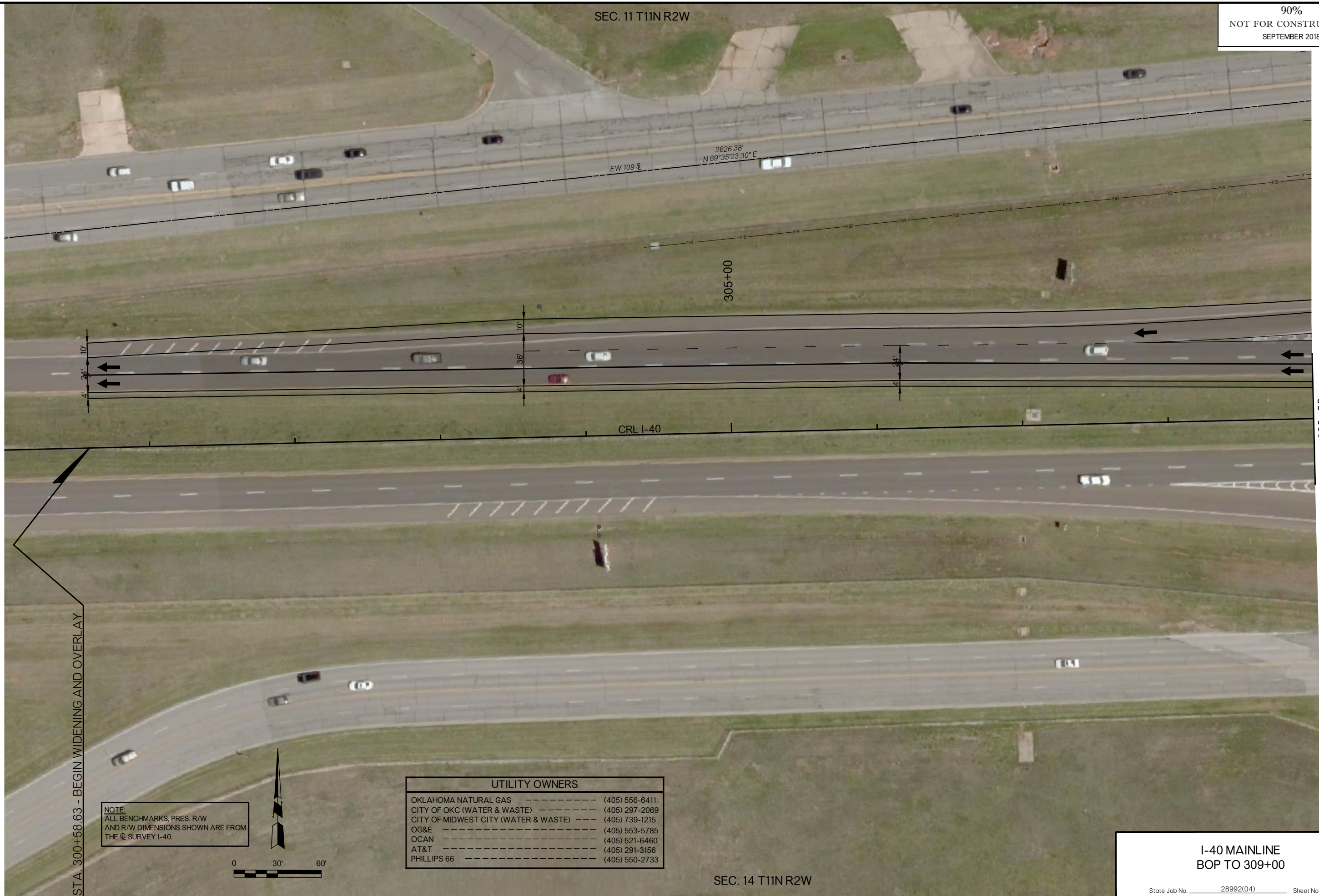
Design	.	BRIDGE "B"	OKLAHOMA COUNTY
Drawn	PKW 01/18	I-40/DOUGLAS BOULEVARD INTERCHANGE	
Checked	.	BRIDGE CONSTRUCTION CROSS SECTIONS	
Approved	.	CL STA. 114+41.15	
Squad		Job Piece No. 28992(04)	Sheet No. B004

NOTE: FOR BRIDGE CONSTRUCTION LAYOUT PLANS AND SHEET PILE LIMITS/LOCATIONS, SEE SHEET NOS. B005 AND B006.

"PRELIMINARY PLANS - NOT FOR CONSTRUCTION"

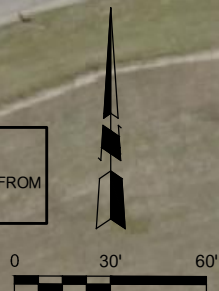
SEC. 11 T11N R2W

90%
NOT FOR CONSTRUCTION
SEPTEMBER 2018



STA. 300+58.63 - BEGIN WIDENING AND OVERLAY

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.



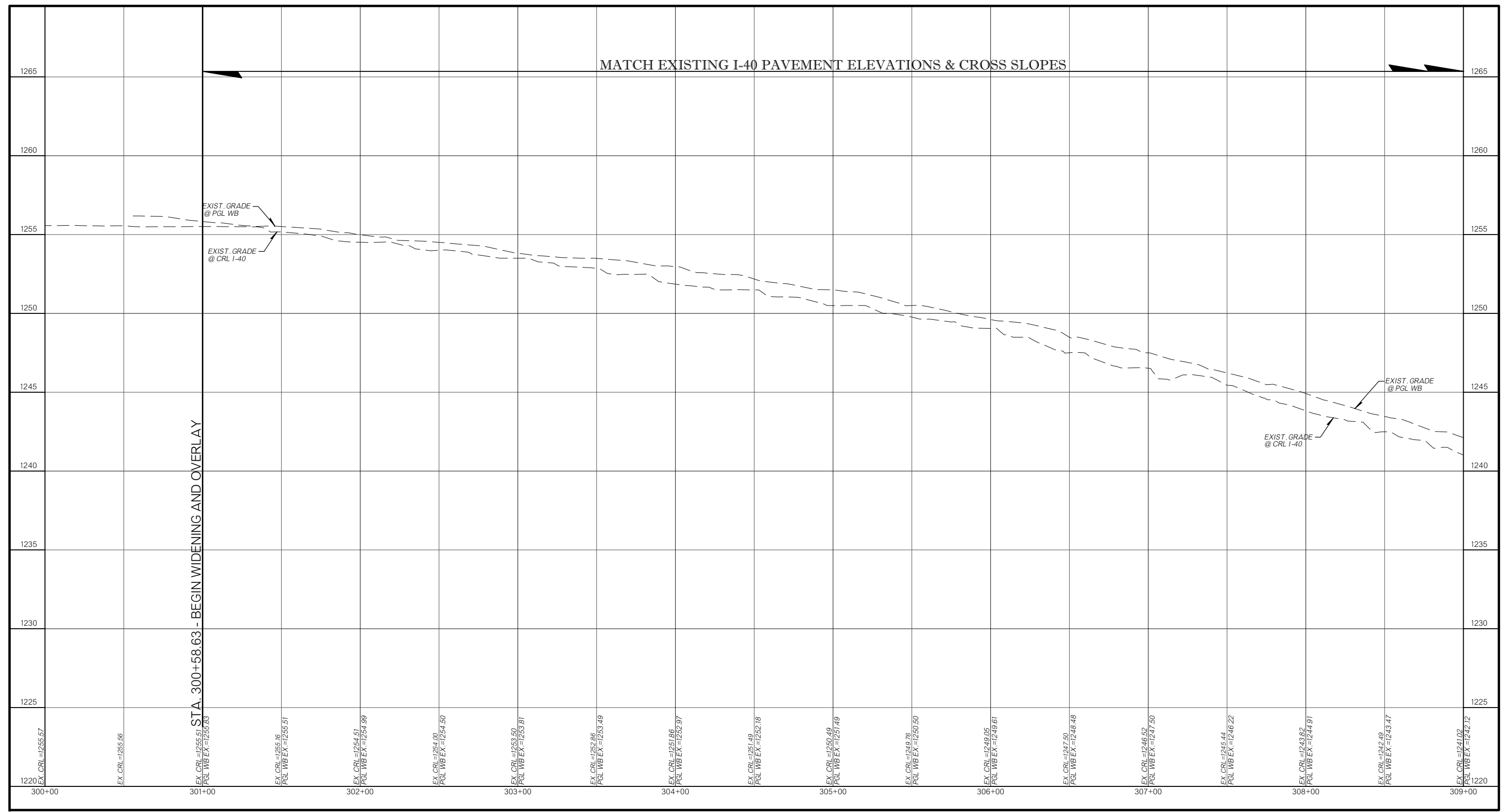
UTILITY OWNERS		
OKLAHOMA NATURAL GAS	-----	(405) 556-6411
CITY OF OKC (WATER & WASTE)	-----	(405) 297-2069
CITY OF MIDWEST CITY (WATER & WASTE)	----	(405) 739-1215
OG&E	-----	(405) 553-5785
O CAN	-----	(405) 521-6460
AT&T	-----	(405) 291-3156
PHILLIPS 66	-----	(405) 550-2733

SEC. 14 T11N R2W

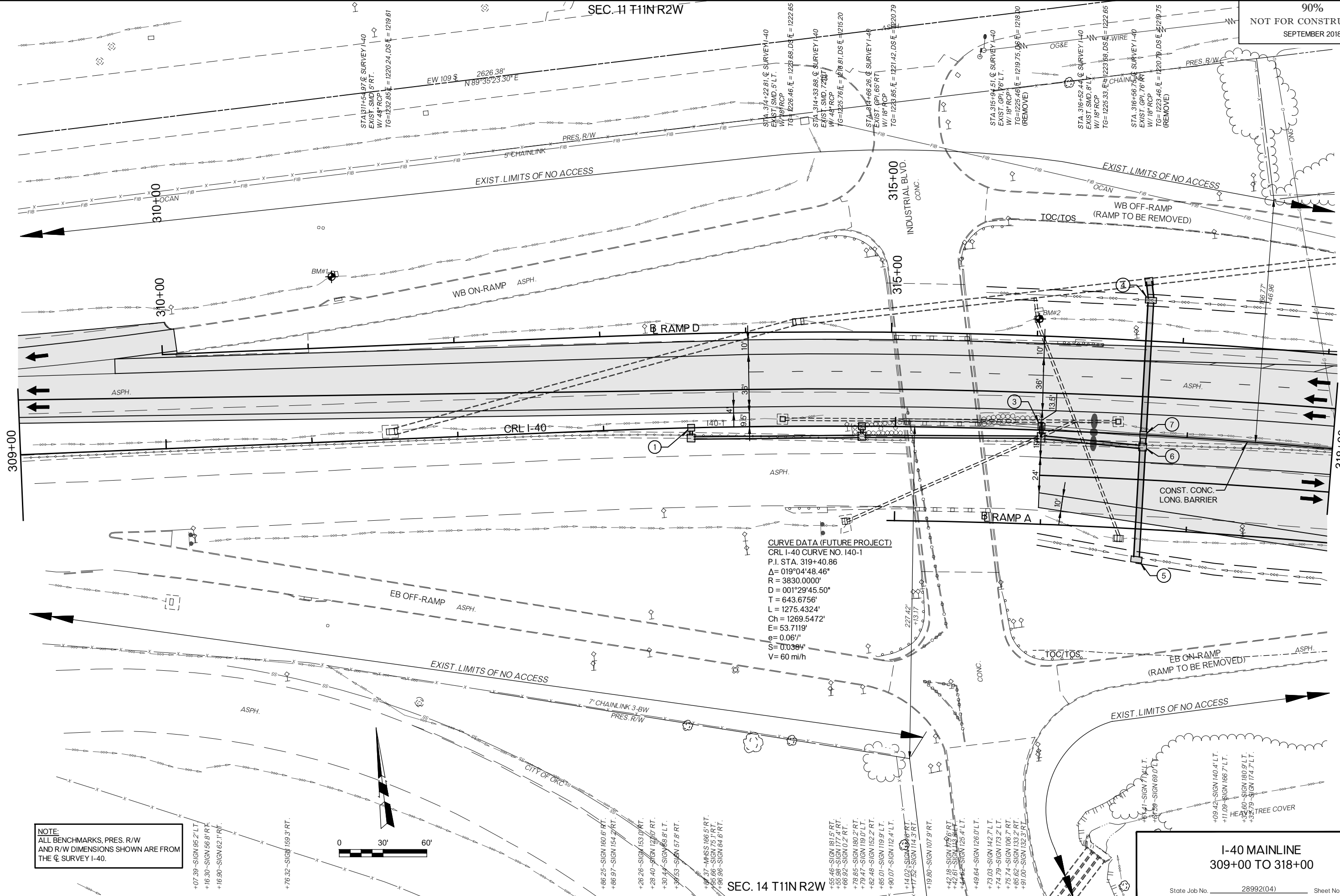
I-40 MAINLINE
BOP TO 309+00
State Job No. 28992(04) Sheet No. R053

309+00

I-40 & DOUGLAS BLVD. INTERCHANGE
OKLAHOMA COUNTY



SEC. 11 T11NR2W



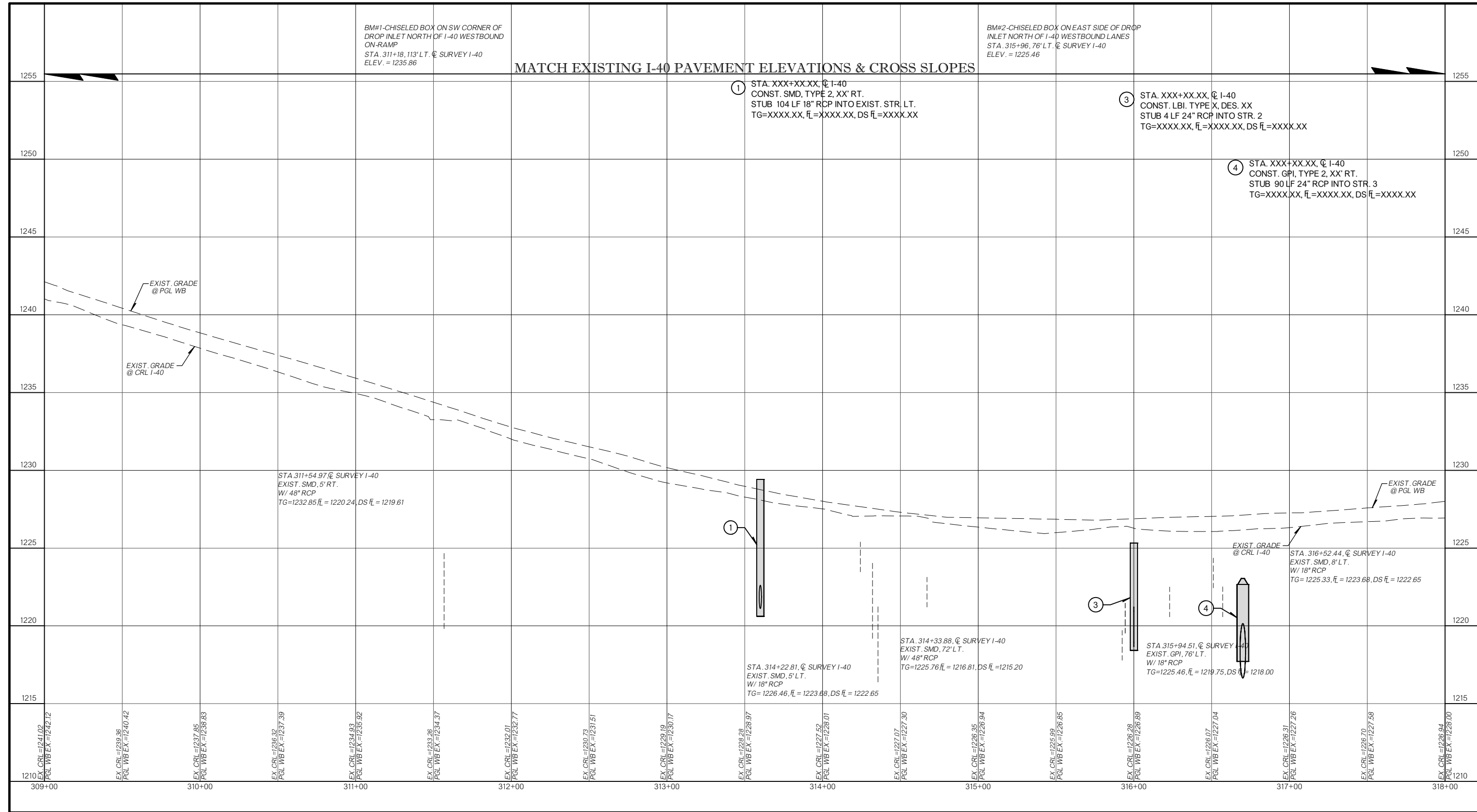
CURVE DATA (FUTURE PROJECT)
 CRL I-40 CURVE NO. 140-1
 P.I. STA. 319+40.86
 $\Delta = 019^{\circ}04'48.46''$
 $R = 3830.0000'$
 $D = 001^{\circ}29'45.50''$
 $T = 643.6756'$
 $L = 1275.4324'$
 $Ch = 1269.5472'$
 $E = 53.7119'$
 $e = 0.06''$
 $S = 0.038''$
 $V = 60 \text{ mi/h}$

NOTE:
 ALL BENCHMARKS, PRES. R/W
 AND R/W DIMENSIONS SHOWN ARE FROM
 THE Q SURVEY I-40.

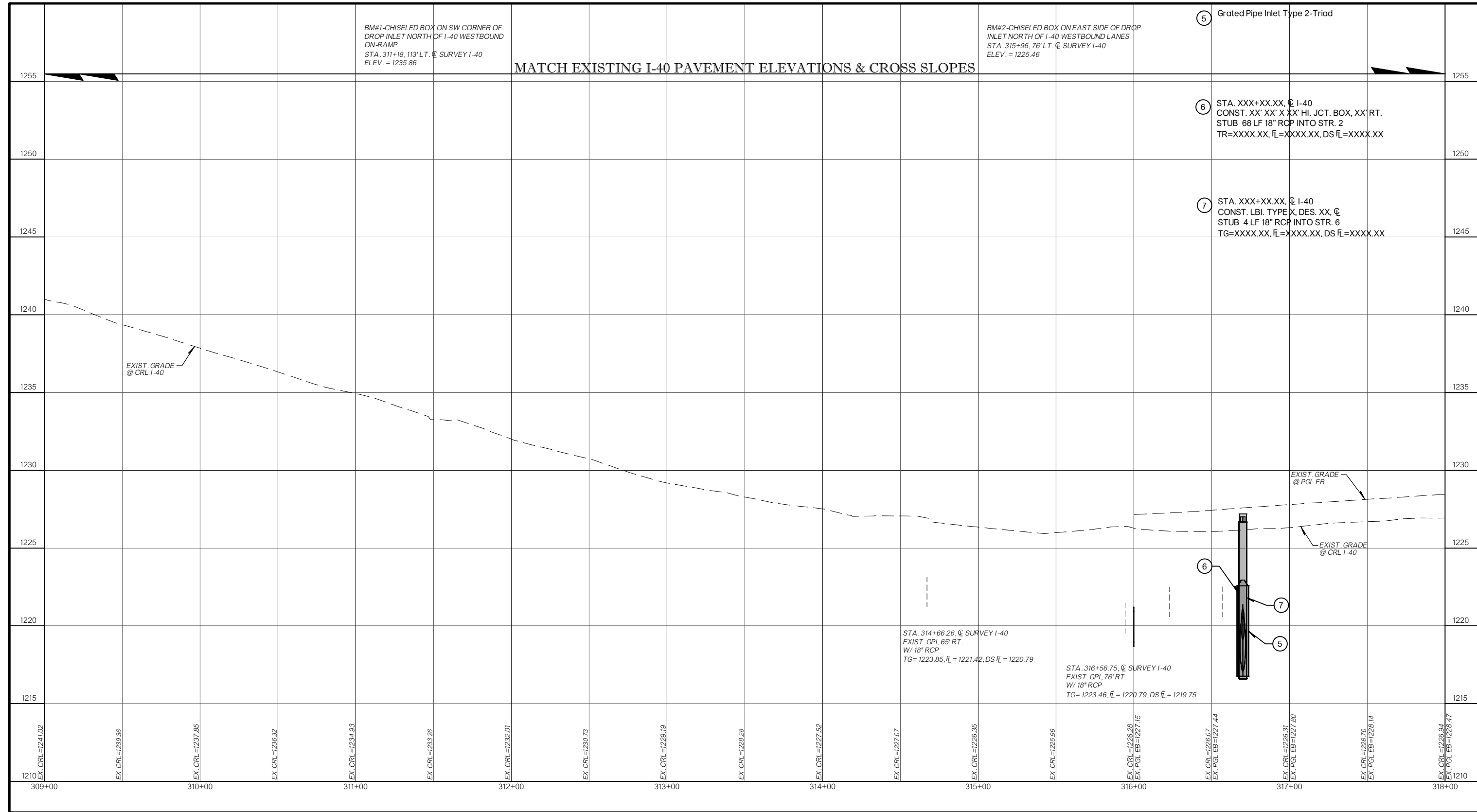
- +07.39-SIGN 95.2' LT.
- +16.30-SIGN 56.8' RT.
- +16.90-SIGN 62.1' RT.
- +76.32-SIGN 159.3' RT.
- +65.46-SIGN 181.5' RT.
- +55.98-SIGN 171.4' RT.
- +66.92-SIGN 0.2' RT.
- +78.85-SIGN 180.2' RT.
- +79.47-SIGN 119.0' LT.
- +62.48-SIGN 152.2' RT.
- +85.01-SIGN 119.9' LT.
- +80.07-SIGN 112.4' LT.
- +14.02-SIGN 114.3' RT.
- +19.80-SIGN 107.9' RT.
- +42.18-SIGN 179.6' RT.
- +42.61-SIGN 145.2' RT.
- +44.79-SIGN 126.4' LT.
- +49.64-SIGN 126.0' LT.
- +73.03-SIGN 142.7' LT.
- +74.79-SIGN 173.2' LT.
- +75.74-SIGN 106.7' RT.
- +85.62-SIGN 133.2' RT.
- +91.00-SIGN 132.3' LT.
- +69.37-MHSS 166.5' RT.
- +55.66-SIGN 75.1' RT.
- +96.96-SIGN 84.6' RT.
- +09.42-SIGN 140.4' LT.
- +17.09-SIGN 166.7' LT.
- +33.80-SIGN 180.9' LT.
- +33.79-SIGN 174.7' LT.

SEC. 14 T11NR2W

I-40 MAINLINE
309+00 TO 318+00



I-40 MAINLINE-WESTBOUND
309+00 TO 318+00



**I-40 MAINLINE-EASTBOUND
309+00 TO 318+00**

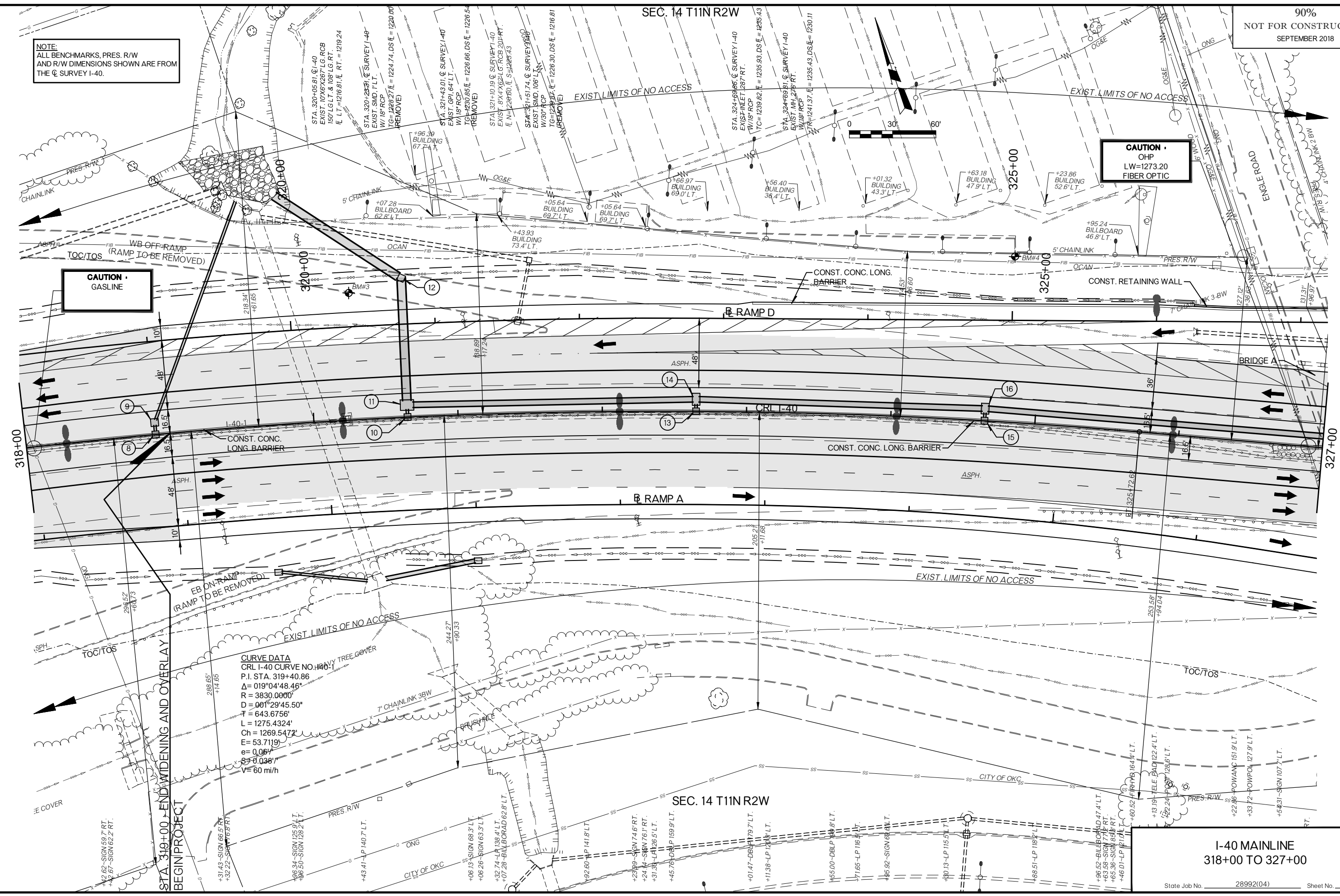
State Job No. 28992(04) Sheet No. R057

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.

SEC. 14 T11N R2W

SEC. 14 T11N R2W

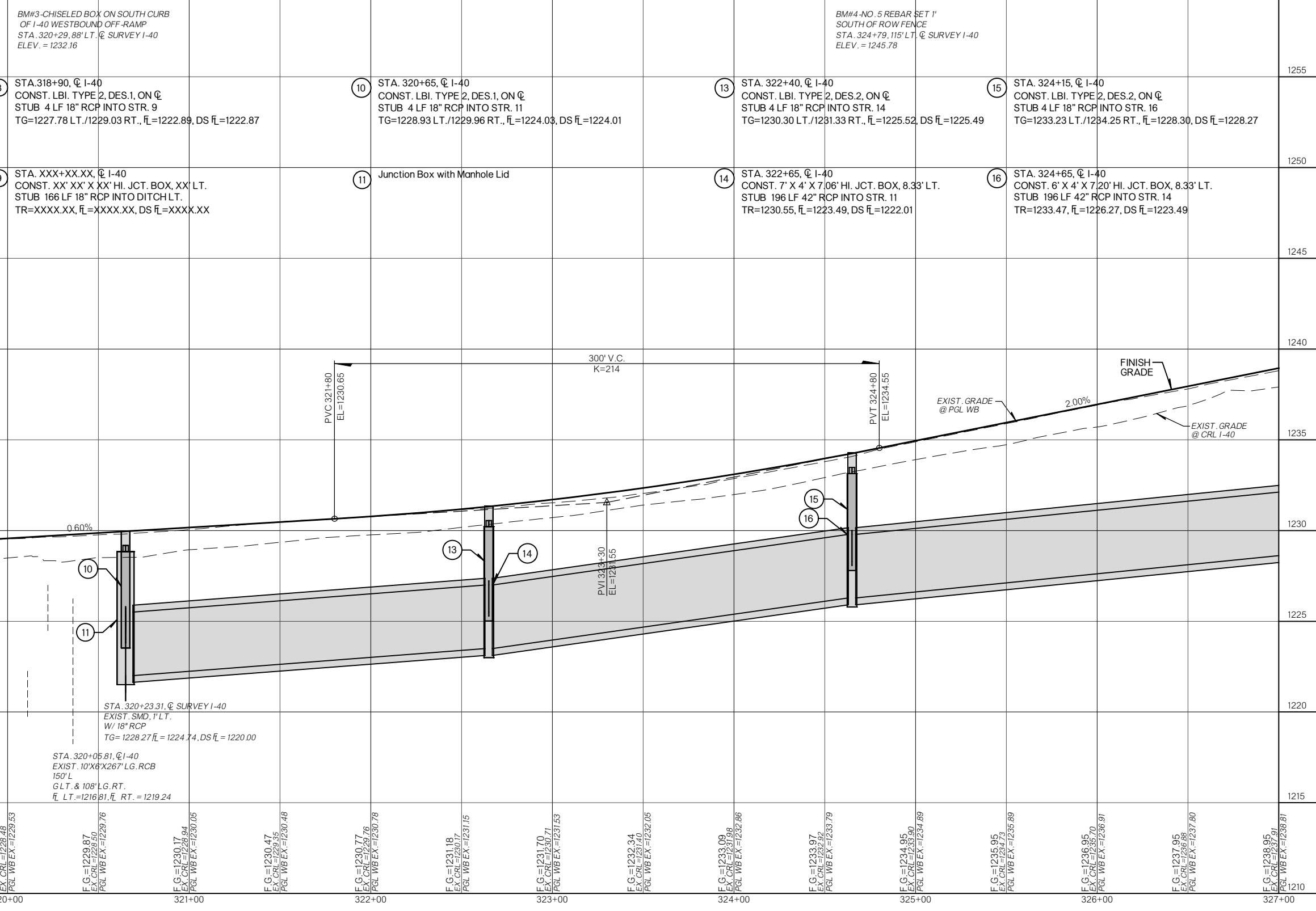


CURVE DATA
CRL I-40 CURVE NO. 14
P.I. STA. 319+40.86
 $\Delta = 019^{\circ}04'48.46''$
 $R = 3830.0000'$
 $D = 001^{\circ}29'45.50''$
 $T = 643.6756'$
 $L = 1275.4324'$
 $Ch = 1269.5472'$
 $E = 53.7119'$
 $e = 0.067$
 $S = 0.0387$
 $V = 60 \text{ mi/h}$

I-40 MAINLINE
318+00 TO 327+00

VARIABLE
GRADE
TRANSITION
TO MATCH
EXISTING I-40
PAVEMENT
ELEVATIONS
& CROSS SLOPES

STA. 319+00 - END WIDENING AND OVERLAY
BEGIN PROJECT



BM#3-CHISELED BOX ON SOUTH CURB
OF I-40 WESTBOUND OFF-RAMP
STA. 320+29.88' LT. @ SURVEY I-40
ELEV. = 1232.16

8 STA. 318+90, @ I-40
CONST. LBI. TYPE 2, DES.1, ON @
STUB 4 LF 18" RCP INTO STR. 9
TG=1227.78 LT./1229.03 RT., f_L =1222.89, DS f_L =1222.87

10 STA. 320+65, @ I-40
CONST. LBI. TYPE 2, DES.1, ON @
STUB 4 LF 18" RCP INTO STR. 11
TG=1228.93 LT./1229.96 RT., f_L =1224.03, DS f_L =1224.01

13 STA. 322+40, @ I-40
CONST. LBI. TYPE 2, DES.2, ON @
STUB 4 LF 18" RCP INTO STR. 14
TG=1230.30 LT./1231.33 RT., f_L =1225.52, DS f_L =1225.49

15 STA. 324+15, @ I-40
CONST. LBI. TYPE 2, DES.2, ON @
STUB 4 LF 18" RCP INTO STR. 16
TG=1233.23 LT./1234.25 RT., f_L =1228.30, DS f_L =1228.27

9 STA. XXX+XX.XX, @ I-40
CONST. XX' XX' X XX' HI. JCT. BOX, XX' LT.
STUB 166 LF 18" RCP INTO DITCH LT.
TR=XXXX.XX, f_L =XXXX.XX, DS f_L =XXXX.XX

11 Junction Box with Manhole Lid

14 STA. 322+65, @ I-40
CONST. 7' X 4' X 7.06' HI. JCT. BOX, 8.33' LT.
STUB 196 LF 42" RCP INTO STR. 11
TR=1230.55, f_L =1223.49, DS f_L =1222.01

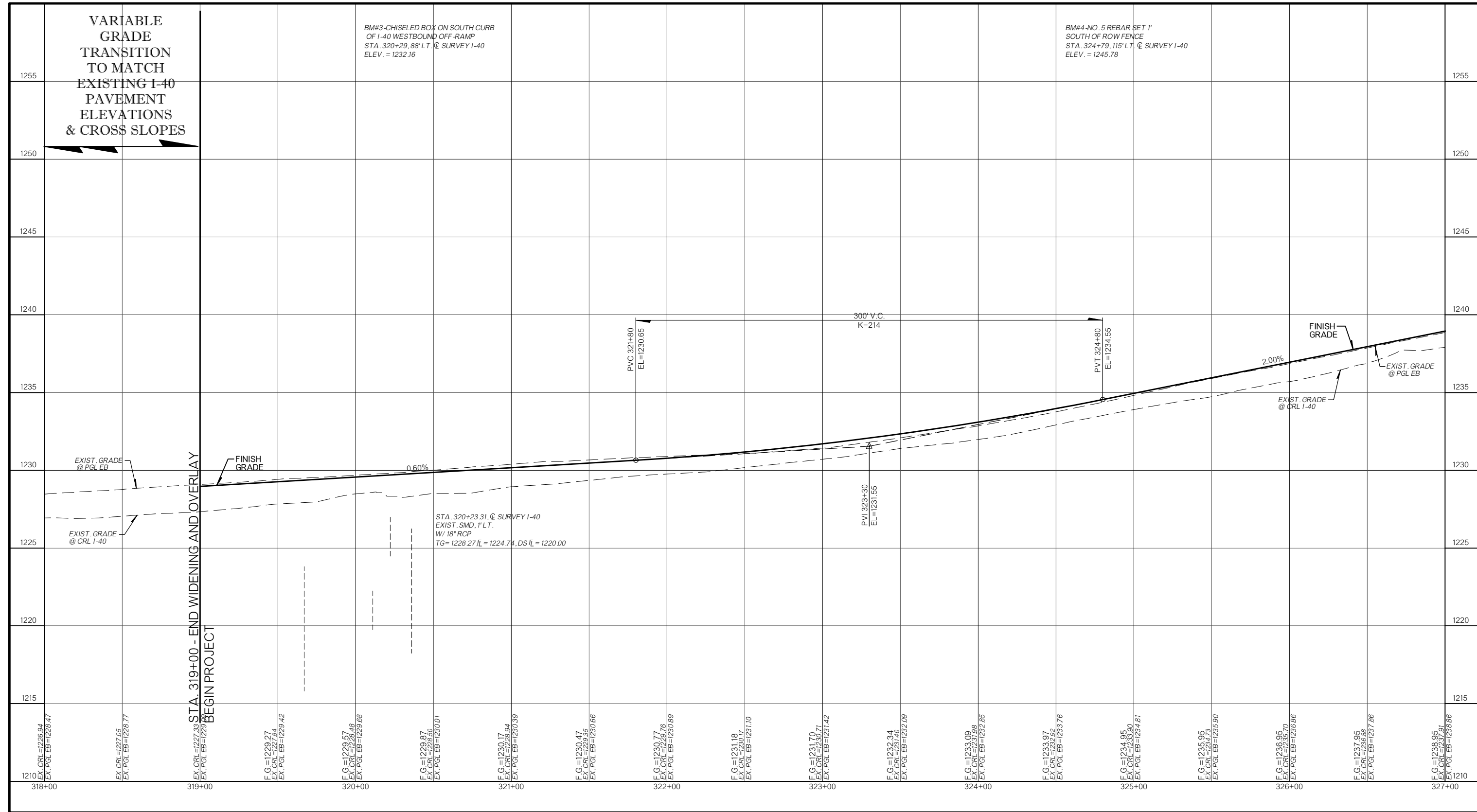
16 STA. 324+65, @ I-40
CONST. 6' X 4' X 7.20' HI. JCT. BOX, 8.33' LT.
STUB 196 LF 42" RCP INTO STR. 14
TR=1233.47, f_L =1226.27, DS f_L =1223.49

STA. 320+23.31, @ SURVEY I-40
EXIST. SMD, 1' LT.
W/ 18" RCP
TG= 1228.27 f_L = 1224.74, DS f_L = 1220.00

STA. 320+05.81, @ I-40
EXIST. 10'X8'X267' LG. RCB
150' L
@ LT. & 108' LG. RT.
 f_L LT.=1216.81, f_L RT. = 1219.24

1210	EX. CRL = 1226.94 PGL WB EX = 1228.00	EX. CRL = 1227.05 PGL WB EX = 1228.51	F.G. = 1228.97 EX. CRL = 1227.33 PGL WB EX = 1228.85	F.G. = 1229.27 EX. CRL = 1227.84 PGL WB EX = 1229.22	F.G. = 1229.57 EX. CRL = 1228.48 PGL WB EX = 1229.53	F.G. = 1229.87 EX. CRL = 1228.94 PGL WB EX = 1229.76	F.G. = 1230.17 EX. CRL = 1229.40 PGL WB EX = 1230.05	F.G. = 1230.47 EX. CRL = 1229.85 PGL WB EX = 1230.48	F.G. = 1230.77 EX. CRL = 1230.30 PGL WB EX = 1230.78	F.G. = 1231.18 EX. CRL = 1230.71 PGL WB EX = 1231.15	F.G. = 1231.70 EX. CRL = 1231.10 PGL WB EX = 1231.53	F.G. = 1232.34 EX. CRL = 1231.50 PGL WB EX = 1232.05	F.G. = 1233.09 EX. CRL = 1231.98 PGL WB EX = 1232.86	F.G. = 1233.97 EX. CRL = 1232.82 PGL WB EX = 1233.79	F.G. = 1234.95 EX. CRL = 1233.70 PGL WB EX = 1234.89	F.G. = 1235.95 EX. CRL = 1234.73 PGL WB EX = 1235.89	F.G. = 1236.95 EX. CRL = 1235.70 PGL WB EX = 1236.91	F.G. = 1237.95 EX. CRL = 1236.68 PGL WB EX = 1237.80	F.G. = 1238.95 EX. CRL = 1237.65 PGL WB EX = 1238.81
318+00			319+00		320+00		321+00		322+00		323+00		324+00		325+00		326+00		327+00

I-40 MAINLINE-WESTBOUND
318+00 TO 327+00



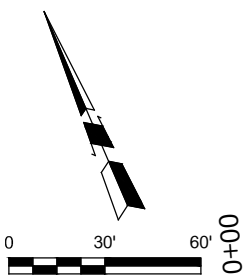
I-40 MAINLINE-EASTBOUND
318+00 TO 327+00

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.

STA. 327+60.05 @ SURVEY I-40
EXIST. GPI, 76' LT.
TG=1237.93, E= 1232.60, DS E= 1232.00
(REMOVE)

STA. 327+69.81 @ SURVEY I-40
EXIST. SMD, 1' LT.
TG=1238.82, E= 1235.14
(REMOVE)

STA. 328+25.84 @ SURVEY I-40
EXIST. GPI, 72' RT.
TG=1239.60, E= 1233.21
(REMOVE)



SEC. 14 T11NR2W

90%
NOT FOR CONSTRUCTION
SEPTEMBER 2018

STA. 331+99.81 @ SURVEY I-40
EXIST. GPI, 54' LT.
TG=1243.19, E= 1243.97, DS E= 1243.29
(REMOVE)

STA. 332+00.72 @ SURVEY I-40
EXIST. SMD, 1' LT.
TG=1247.66, E= 1244.31, DS E= 1243.29
(REMOVE)

STA. 332+01.23 @ SURVEY I-40
EXIST. GPI, 53' RT.
TG=1248.17, E= 1243.82, DS E= 1243.29
(REMOVE)

STA. 334+43.78 @ SURVEY I-40
EXIST. GPI, 81' LT.
TG=1251.38, E= 1245.72
(REMOVE)

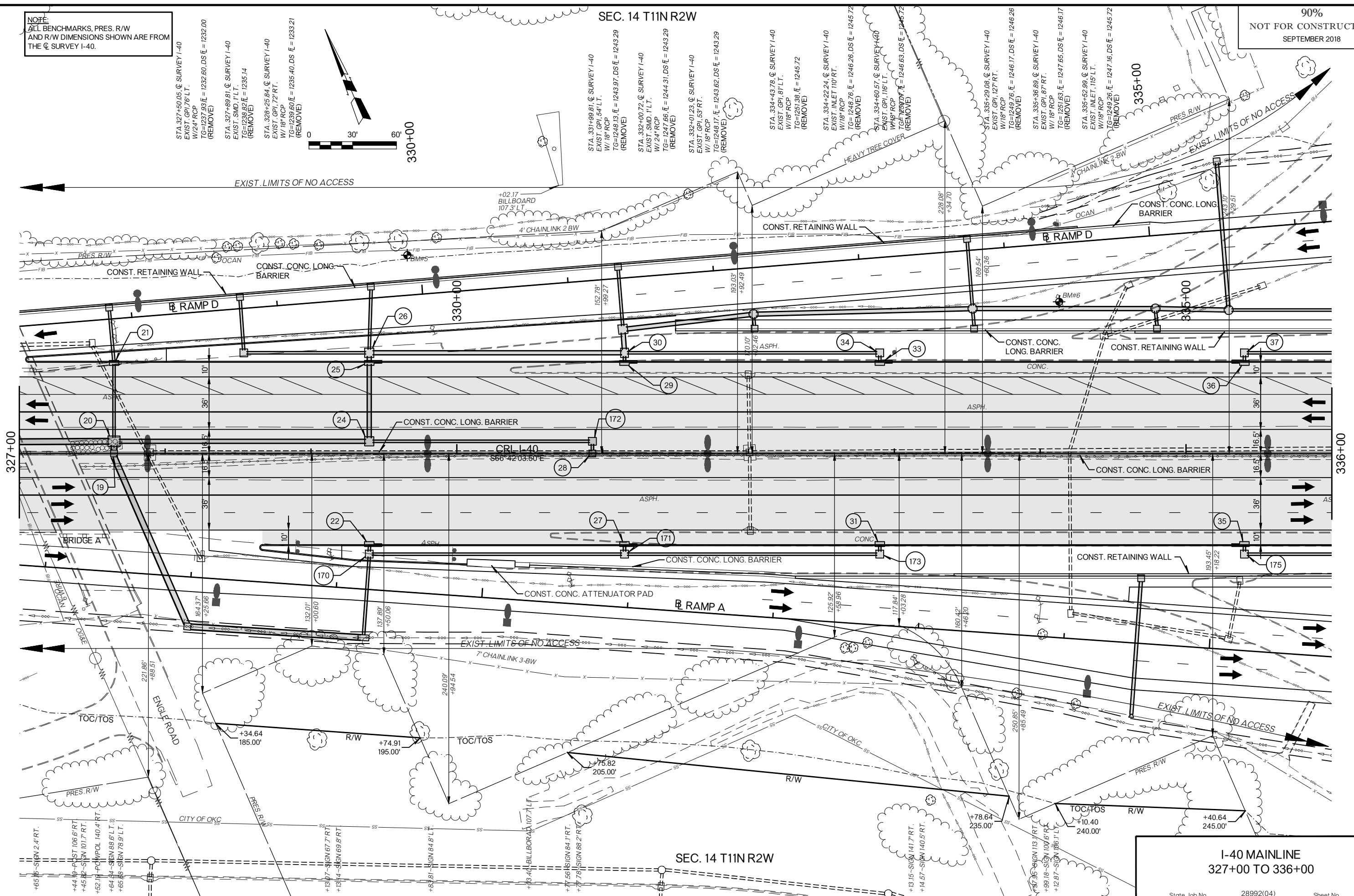
STA. 334+22.24 @ SURVEY I-40
EXIST. INLET 10' RT.
TG=1248.76, E= 1246.26, DS E= 1245.72
(REMOVE)

STA. 334+60.57 @ SURVEY I-40
EXIST. GPI, 116' LT.
TG=1249.00, E= 1246.63, DS E= 1245.72
(REMOVE)

STA. 335+29.08 @ SURVEY I-40
EXIST. GPI, 127' RT.
TG=1249.76, E= 1246.17, DS E= 1246.26
(REMOVE)

STA. 335+36.89 @ SURVEY I-40
EXIST. GPI, 87' RT.
TG=1251.63, E= 1247.65, DS E= 1246.17
(REMOVE)

STA. 335+52.89 @ SURVEY I-40
EXIST. INLET, 115' LT.
TG=1249.26, E= 1247.16, DS E= 1245.72
(REMOVE)

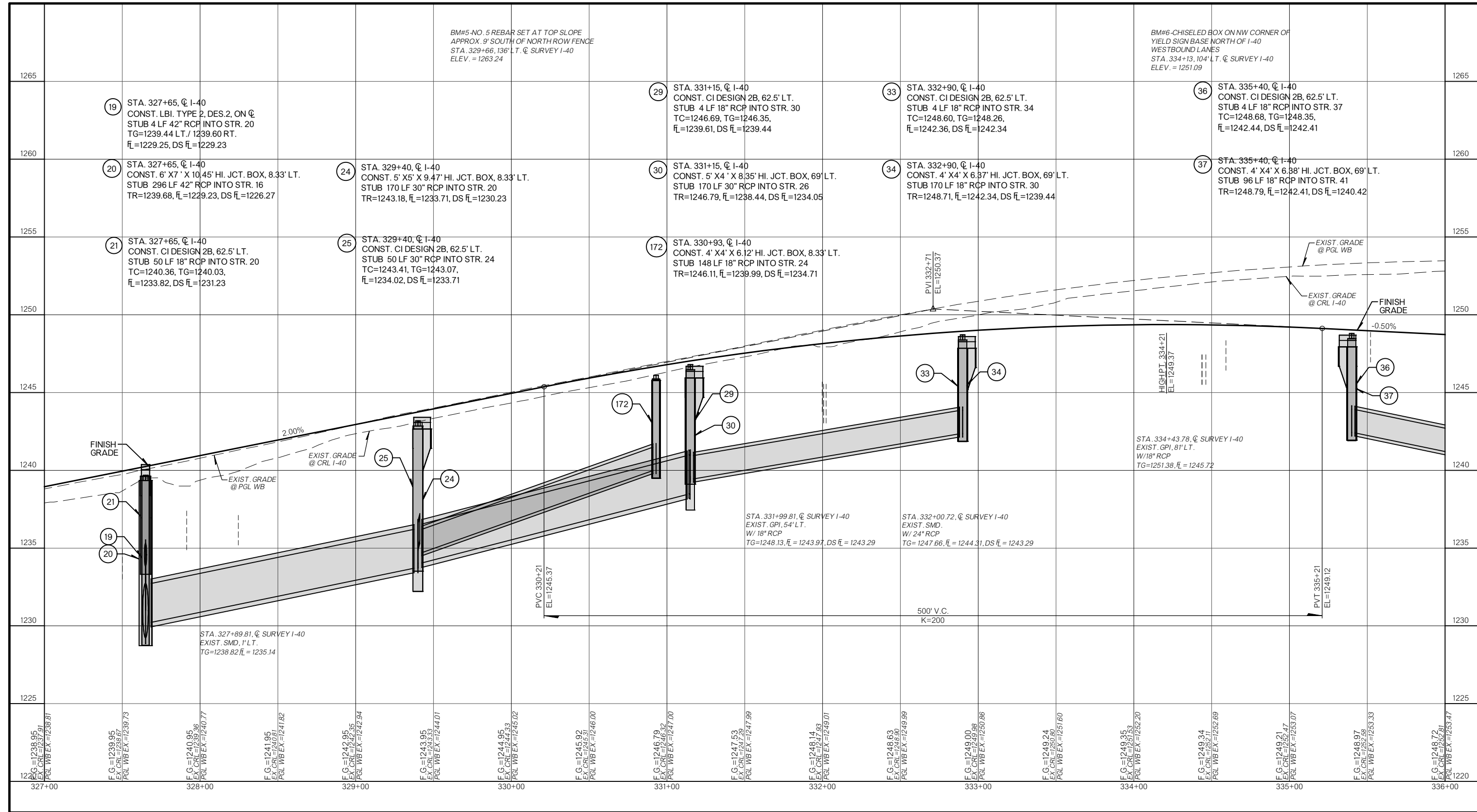


SEC. 14 T11NR2W

I-40 MAINLINE
327+00 TO 336+00

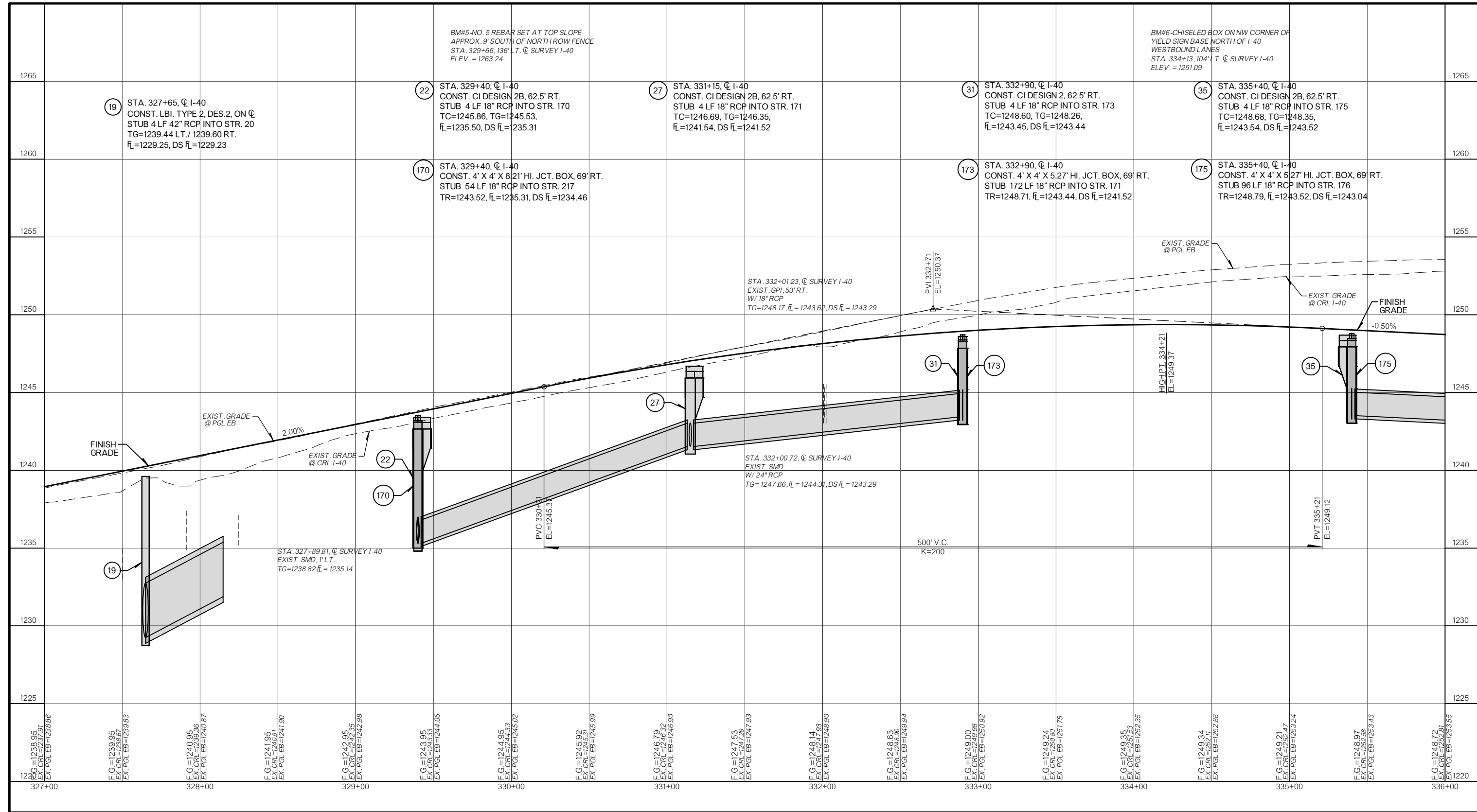
BM#5-NO. 5 REBAR SET AT TOP SLOPE
APPROX. 9' SOUTH OF NORTH ROW FENCE
STA. 329+66, 136' LT. Q SURVEY I-40
ELEV. = 1263.24

BM#6-CHISELED BOX ON NW CORNER OF
YIELD SIGN BASE NORTH OF I-40
WESTBOUND LANES
STA. 334+13, 104' LT. Q SURVEY I-40
ELEV. = 1251.09



I-40 MAINLINE-WESTBOUND
327+00 TO 336+00

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



BM#5-NO. 5 REBAR SET AT TOP SLOPE
APPROX. 9' SOUTH OF NORTH ROW FENCE
STA. 329+66, 136' LT. \odot SURVEY I-40
ELEV. = 1263.24

BM#6-CHISELED BOX ON NW CORNER OF
YIELD SIGN BASE NORTH OF I-40
WESTBOUND LANES
STA. 334+13, 104' LT. \odot SURVEY I-40
ELEV. = 1251.09

19 STA. 327+65, \odot I-40
CONST. LBI. TYPE 2, DES. 2, ON \odot
STUB 4 LF 42" RCP INTO STR. 20
TG=1239.44 LT./ 1239.60 RT.
f_L=1229.25, DS f_L=1229.23

22 STA. 329+40, \odot I-40
CONST. CI DESIGN 2B, 62.5' RT.
STUB 4 LF 18" RCP INTO STR. 170
TC=1245.86, TG=1245.53,
f_L=1235.50, DS f_L=1235.31

27 STA. 331+15, \odot I-40
CONST. CI DESIGN 2B, 62.5' RT.
STUB 4 LF 18" RCP INTO STR. 171
TC=1246.69, TG=1246.35,
f_L=1241.54, DS f_L=1241.52

31 STA. 332+90, \odot I-40
CONST. CI DESIGN 2, 62.5' RT.
STUB 4 LF 18" RCP INTO STR. 173
TC=1248.60, TG=1248.26,
f_L=1243.45, DS f_L=1243.44

35 STA. 335+40, \odot I-40
CONST. CI DESIGN 2B, 62.5' RT.
STUB 4 LF 18" RCP INTO STR. 175
TC=1248.68, TG=1248.35,
f_L=1243.54, DS f_L=1243.52

170 STA. 329+40, \odot I-40
CONST. 4' X 4' X 8' 21" HI. JCT. BOX, 69' RT.
STUB 54 LF 18" RCP INTO STR. 217
TR=1243.52, f_L=1235.31, DS f_L=1234.46

173 STA. 332+90, \odot I-40
CONST. 4' X 4' X 5' 27" HI. JCT. BOX, 69' RT.
STUB 172 LF 18" RCP INTO STR. 171
TR=1248.71, f_L=1243.44, DS f_L=1241.52

175 STA. 335+40, \odot I-40
CONST. 4' X 4' X 5' 27" HI. JCT. BOX, 69' RT.
STUB 96 LF 18" RCP INTO STR. 176
TR=1248.79, f_L=1243.52, DS f_L=1243.04

STA. 332+01.23, \odot SURVEY I-40
EXIST. GPI, 53' RT.
W/ 18" RCP
TG=1248.17, f_L=1243.62, DS f_L=1243.29

PVI 332+71
EL=1250.37

EXIST. GRADE
@ PGL EB

EXIST. GRADE
@ CRL I-40

FINISH
GRADE

HIGHPT. 334+21
EL=1249.37

PVT 335+21
EL=1249.12

STA. 332+00.72, \odot SURVEY I-40
EXIST. SMD
W/ 24" RCP
TG=1247.66, f_L=1244.31, DS f_L=1243.29

500' V.C.
K=200

PVC 330+41
EL=1245.3

STA. 327+89.81, \odot SURVEY I-40
EXIST. SMD, 1' LT.
TG=1238.82, f_L=1235.14

F.C.=1238.95
EX. CRL=1237.91
EX. PGL EB=1238.86

F.C.=1239.95
EX. CRL=1238.87
EX. PGL EB=1239.83

F.C.=1240.95
EX. CRL=1239.86
EX. PGL EB=1240.87

F.C.=1241.95
EX. CRL=1240.81
EX. PGL EB=1241.80

F.C.=1242.95
EX. CRL=1241.85
EX. PGL EB=1242.88

F.C.=1243.95
EX. CRL=1242.83
EX. PGL EB=1243.85

F.C.=1244.95
EX. CRL=1243.83
EX. PGL EB=1244.82

F.C.=1245.92
EX. CRL=1244.81
EX. PGL EB=1245.89

F.C.=1246.79
EX. CRL=1245.82
EX. PGL EB=1246.90

F.C.=1247.63
EX. CRL=1246.79
EX. PGL EB=1247.93

F.C.=1248.14
EX. CRL=1247.93
EX. PGL EB=1248.90

F.C.=1248.63
EX. CRL=1248.90
EX. PGL EB=1249.94

F.C.=1249.00
EX. CRL=1249.98
EX. PGL EB=1250.92

F.C.=1249.24
EX. CRL=1250.80
EX. PGL EB=1251.75

F.C.=1249.35
EX. CRL=1251.53
EX. PGL EB=1252.35

F.C.=1249.34
EX. CRL=1252.11
EX. PGL EB=1252.88

F.C.=1249.21
EX. CRL=1252.47
EX. PGL EB=1253.24

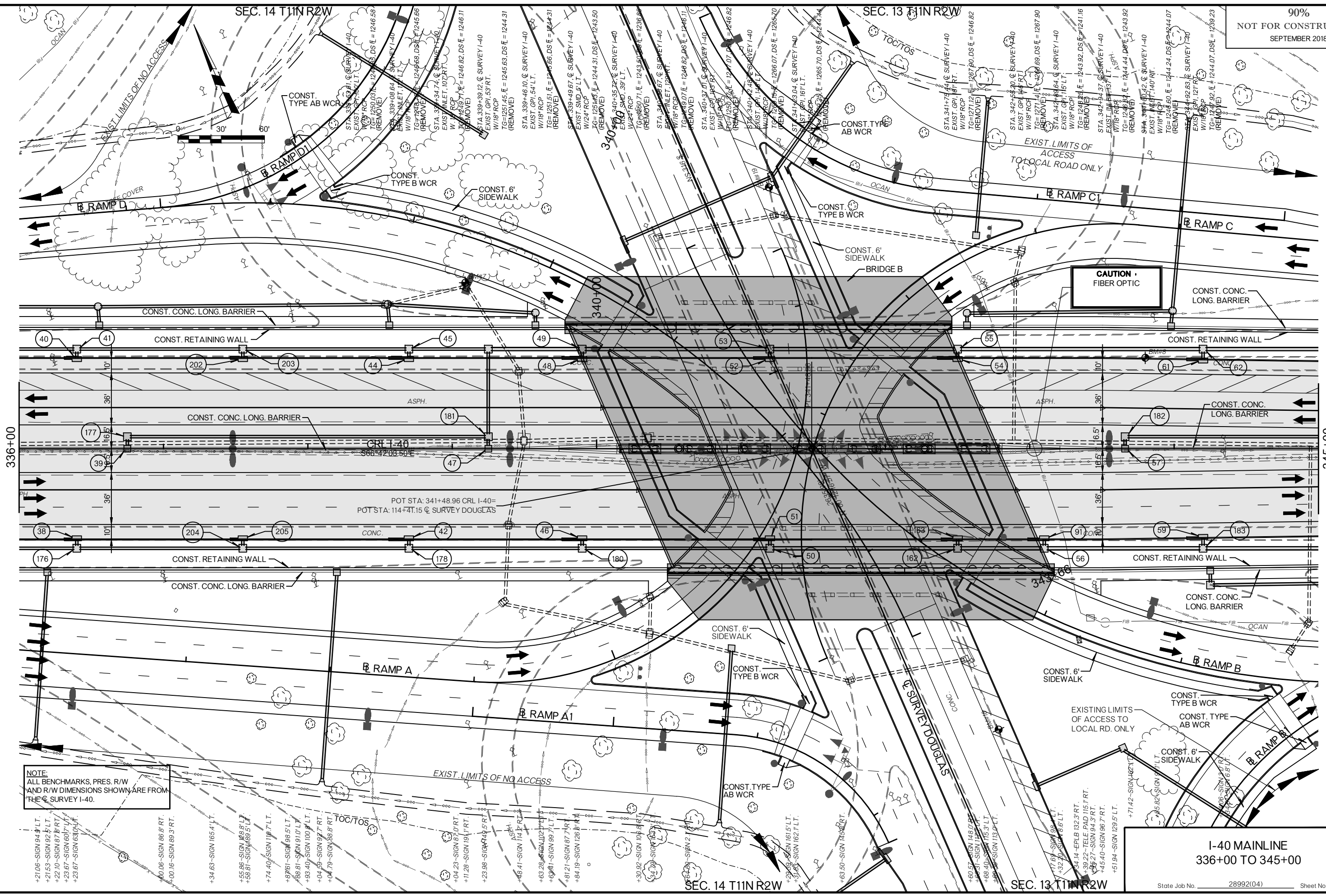
F.C.=1248.97
EX. CRL=1252.59
EX. PGL EB=1253.43

F.C.=1248.72
EX. CRL=1252.81
EX. PGL EB=1253.65

I-40 MAINLINE-EASTBOUND
327+00 TO 336+00

SEC. 14 T11N R2W

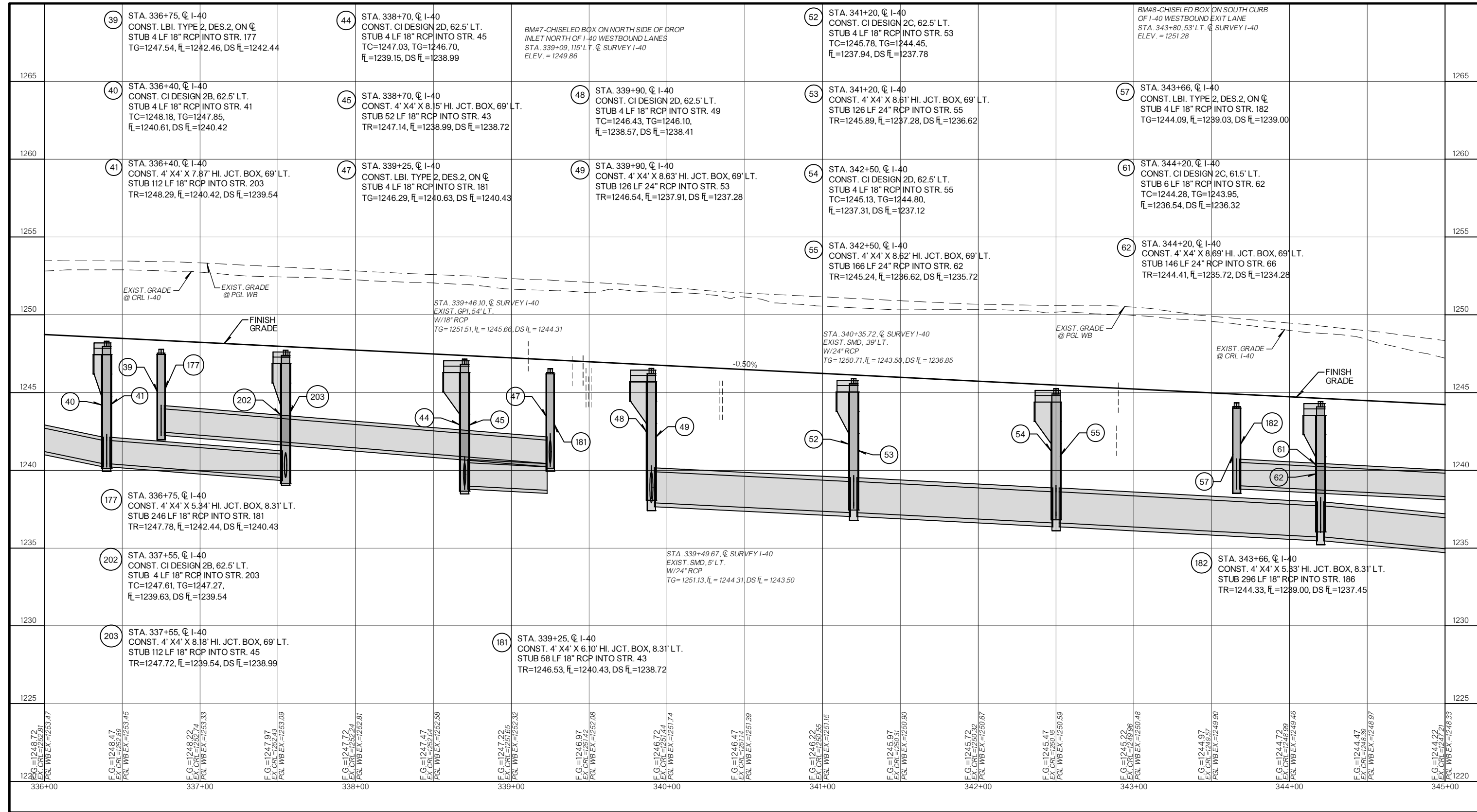
SEC. 13 T11N R2W



NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE C. SURVEY I-40.

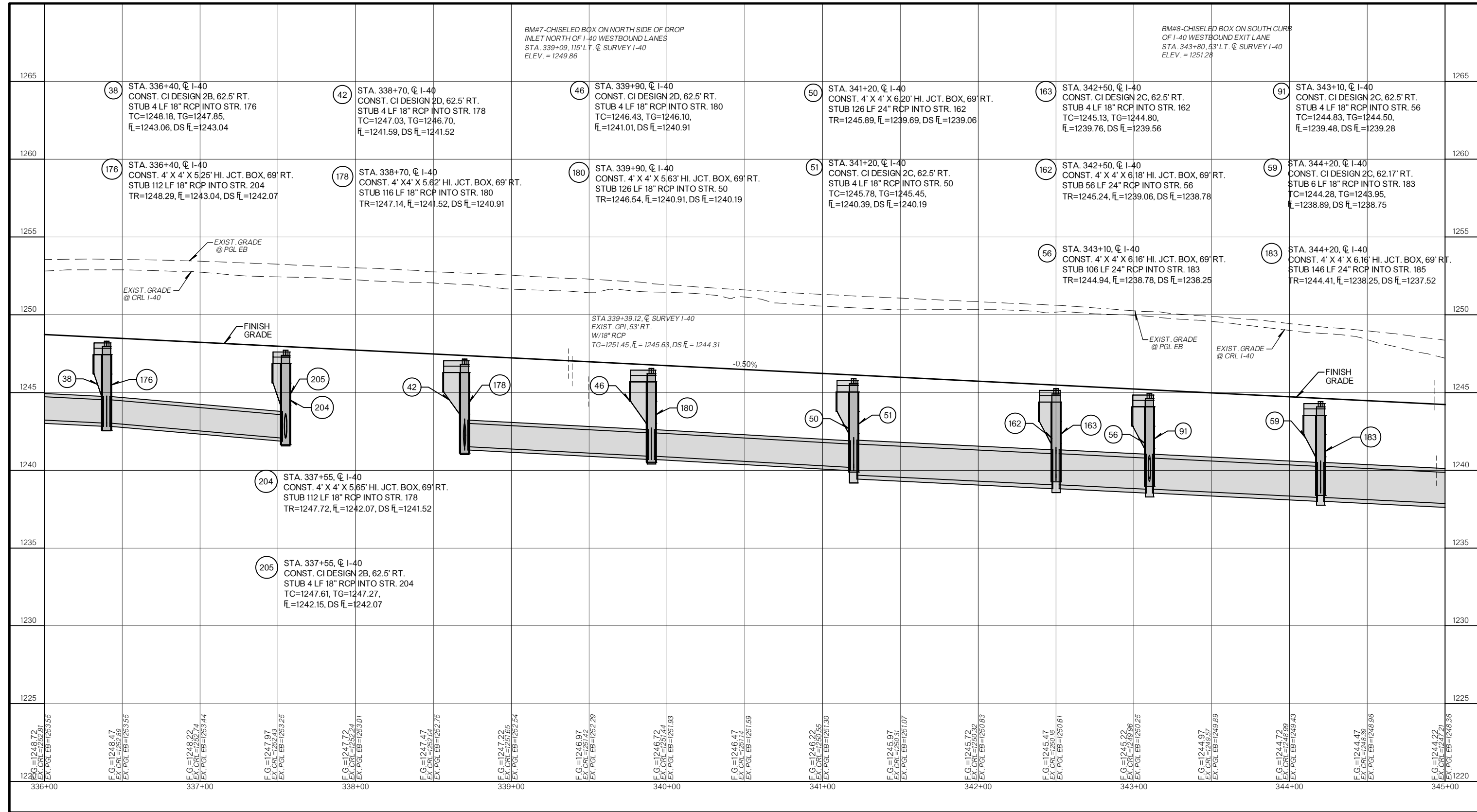
- +21.06 - SIGN 94.9' LT.
- +21.63 - SIGN 92.5' LT.
- +22.10 - SIGN 87.8' RT.
- +23.67 - SIGN 60.7' LT.
- +23.67 - SIGN 63.0' RT.
- +40.06 - SIGN 66.8' RT.
- +00.16 - SIGN 89.3' RT.
- +34.63 - SIGN 165.4' LT.
- +55.86 - SIGN 128.8' LT.
- +58.81 - SIGN 169.5' LT.
- +74.40 - SIGN 119.7' LT.
- +87.61 - SIGN 98.5' LT.
- +88.81 - SIGN 91.0' LT.
- +93.40 - SIGN 100.7' LT.
- +04.59 - SIGN 92.7' RT.
- +04.79 - SIGN 88.8' RT.
- +04.23 - SIGN 87.0' RT.
- +11.28 - SIGN 19.1' RT.
- +23.96 - SIGN 44.5' RT.
- +46.41 - SIGN 14.8' RT.
- +63.29 - SIGN 102.2' RT.
- +69.41 - SIGN 99.7' LT.
- +81.21 - SIGN 87.7' RT.
- +84.19 - SIGN 126.8' RT.
- +30.92 - SIGN 106.8' RT.
- +34.79 - SIGN 152.1' LT.
- +51.63 - SIGN 162.1' LT.
- +63.50 - SIGN 74.8' RT.
- +60.57 - SIGN 148.0' RT.
- +66.37 - SIGN 116.3' LT.
- +68.40 - SIGN 115.3' LT.
- +68.88 - SIGN 113.0' LT.
- +17.69 - SIGN 99.8' LT.
- +32.20 - SIGN 88.6' LT.
- +34.14 - ERLB 132.3' RT.
- +39.22 - TELE. PAD 115.1' RT.
- +46.27 - SIGN 94.3' RT.
- +45.40 - SIGN 96.7' RT.
- +51.94 - SIGN 129.5' LT.
- +71.42 - SIGN 142.1' LT.
- +95.82 - SIGN 91.9' LT.
- +106.39 - SIGN 6.8' RT.

I-40 MAINLINE
336+00 TO 345+00



I-40 MAINLINE-WESTBOUND
336+00 TO 345+00

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

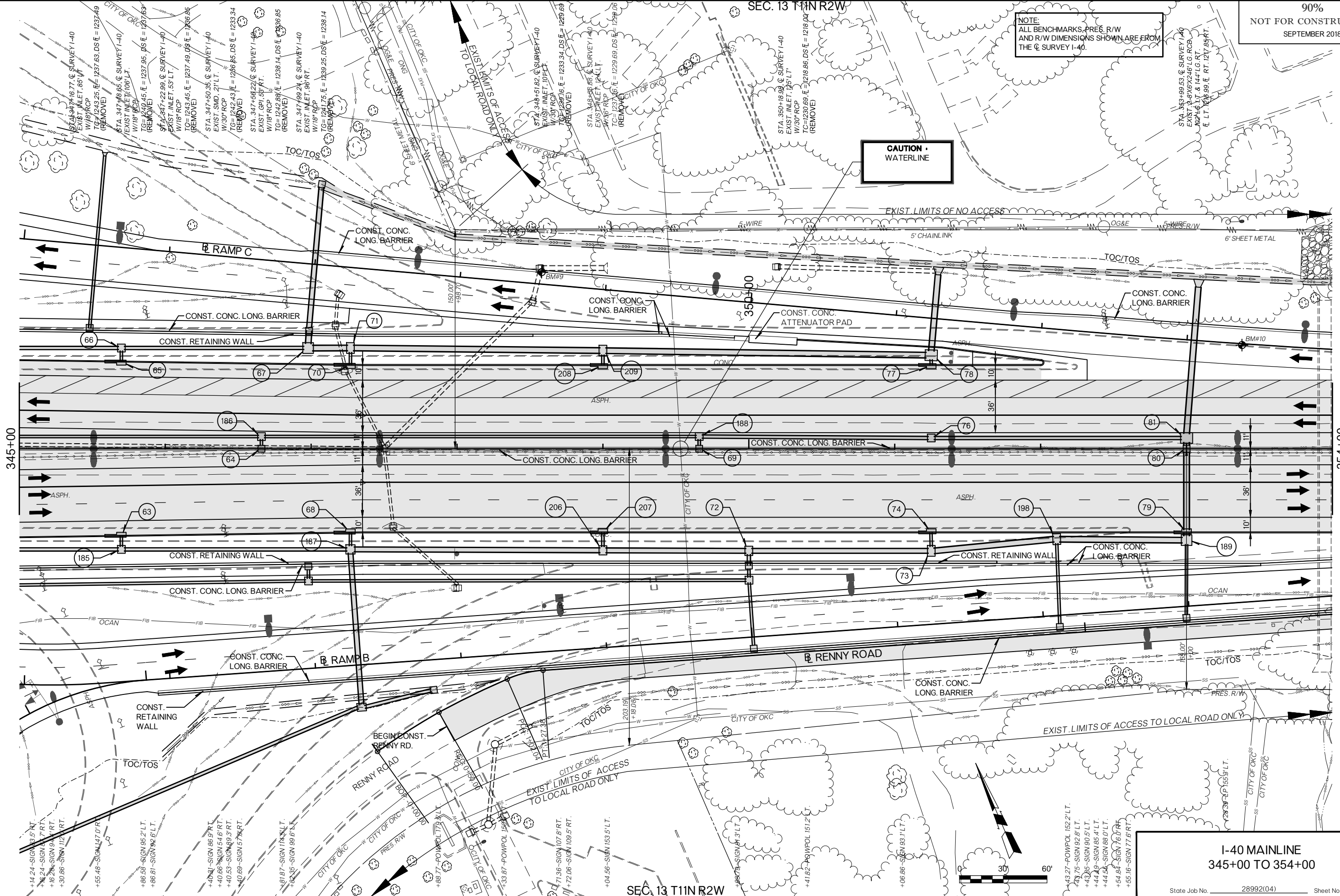


I-40 MAINLINE-EASTBOUND
336+00 TO 345+00

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.

CAUTION
WATERLINE



345+00

354+00

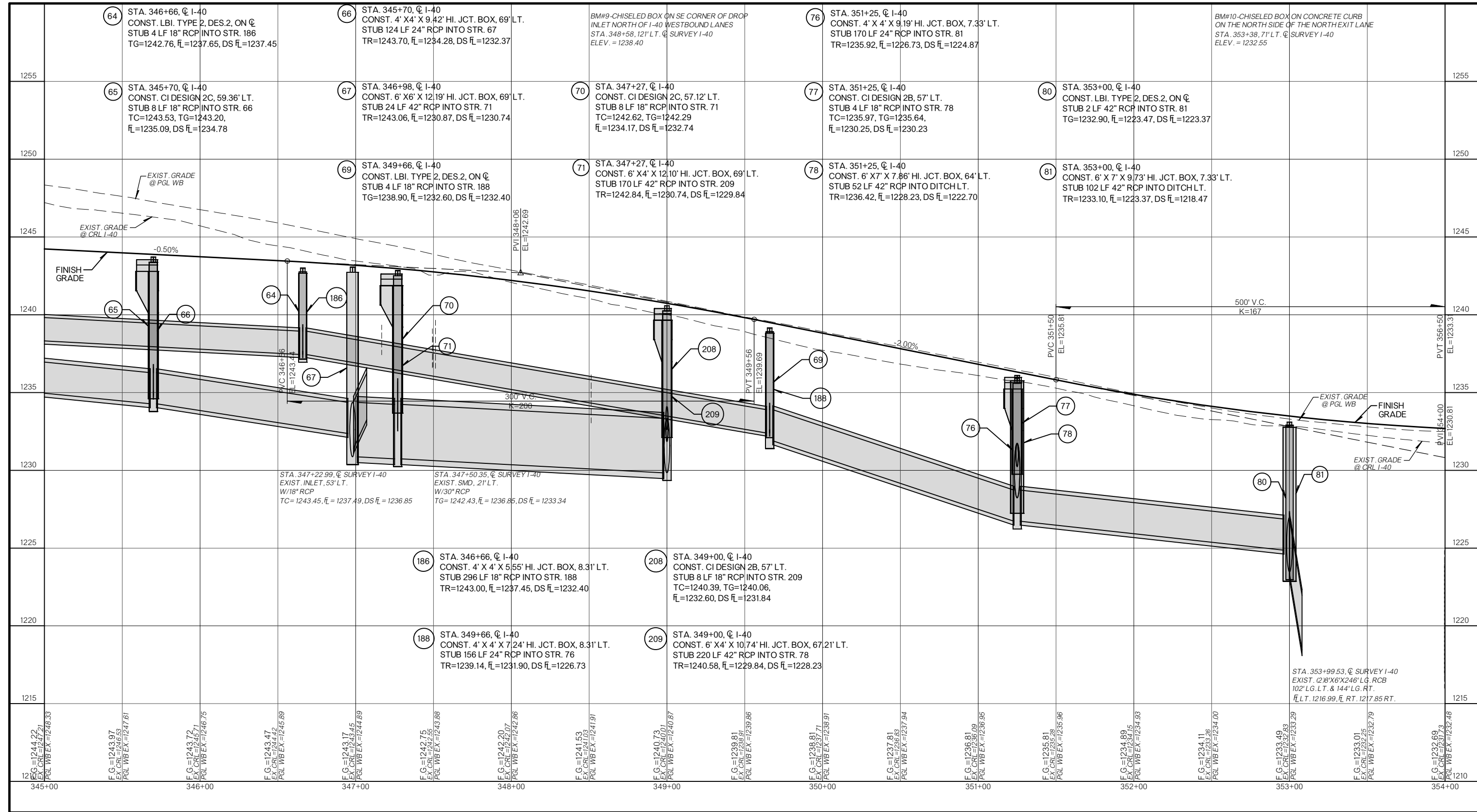
+14.24-SIGN 3.5' RT.
+16.24-SIGN 3.7' RT.
+16.28-SIGN 9' RT.
+30.86-SIGN 112' RT.
+55.48-SIGN 147' D RT.
+66.58-SIGN 95.2' LT.
+66.81-SIGN 92.6' LT.
+40.31-SIGN 86.9' RT.
+40.66-SIGN 54.6' RT.
+40.53-SIGN 89.3' RT.
+40.69-SIGN 57.8' RT.
+81.87-SIGN 174.5' LT.
+82.39-SIGN 99.6' LT.
+88.77-POWPOL 179' LT.
+33.87-POWPOL 159' LT.
+71.36-SIGN 107.8' RT.
+72.06-SIGN 109.5' RT.
+04.56-SIGN 153.5' LT.
+41.82-POWPOL 151.2' LT.
+43.27-POWPOL 152.2' LT.
+43.75-SIGN 92.8' LT.
+43.85-SIGN 90.5' LT.
+44.49-SIGN 85.4' LT.
+44.54-SIGN 88.0' LT.
+54.84-SIGN 76.0' RT.
+55.16-SIGN 77.6' RT.

I-40 MAINLINE
345+00 TO 354+00

State Job No. 28992(04) Sheet No. R067

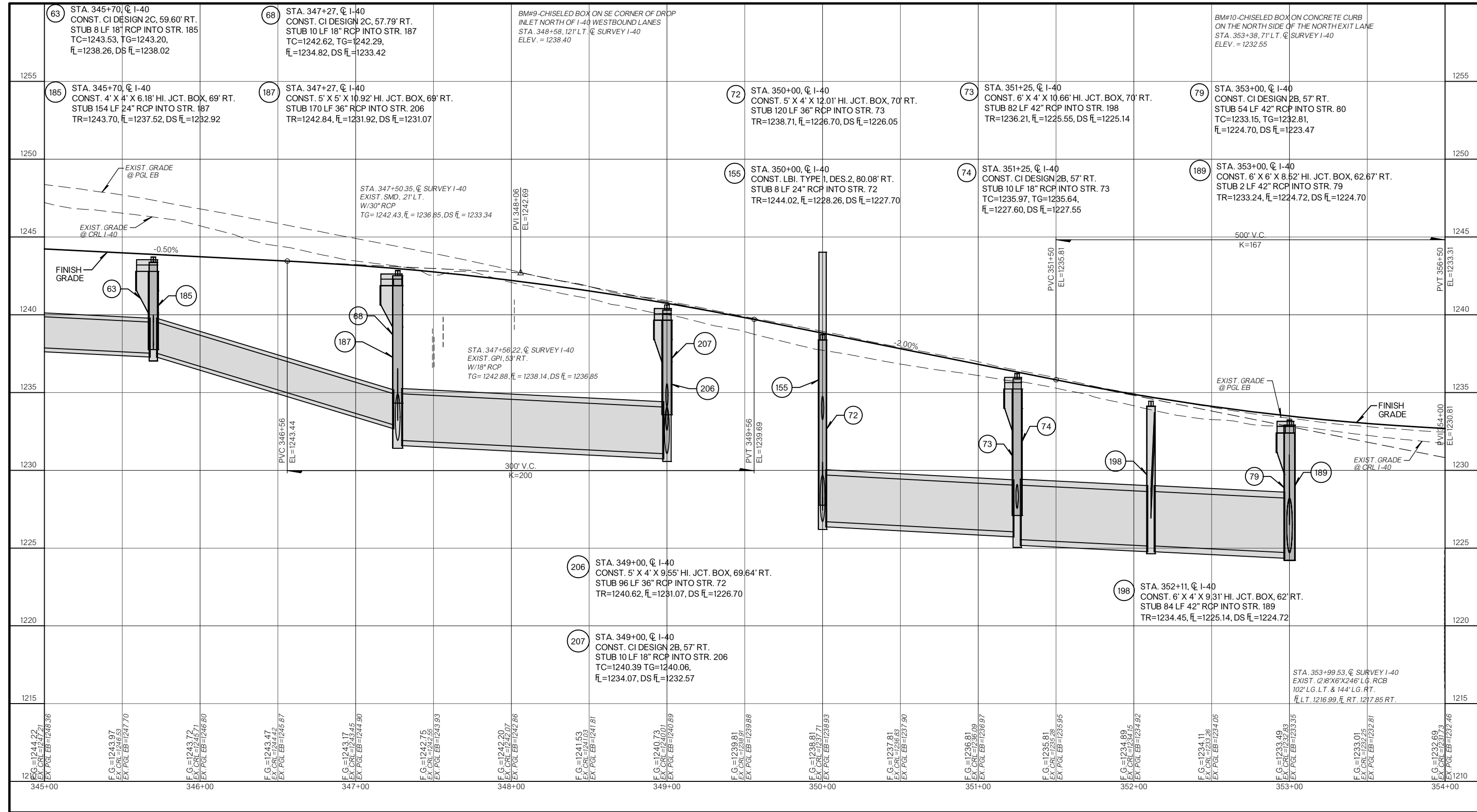
SEC. 13 T11N R2W

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



I-40 MAINLINE-WESTBOUND
345+00 TO 354+00

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



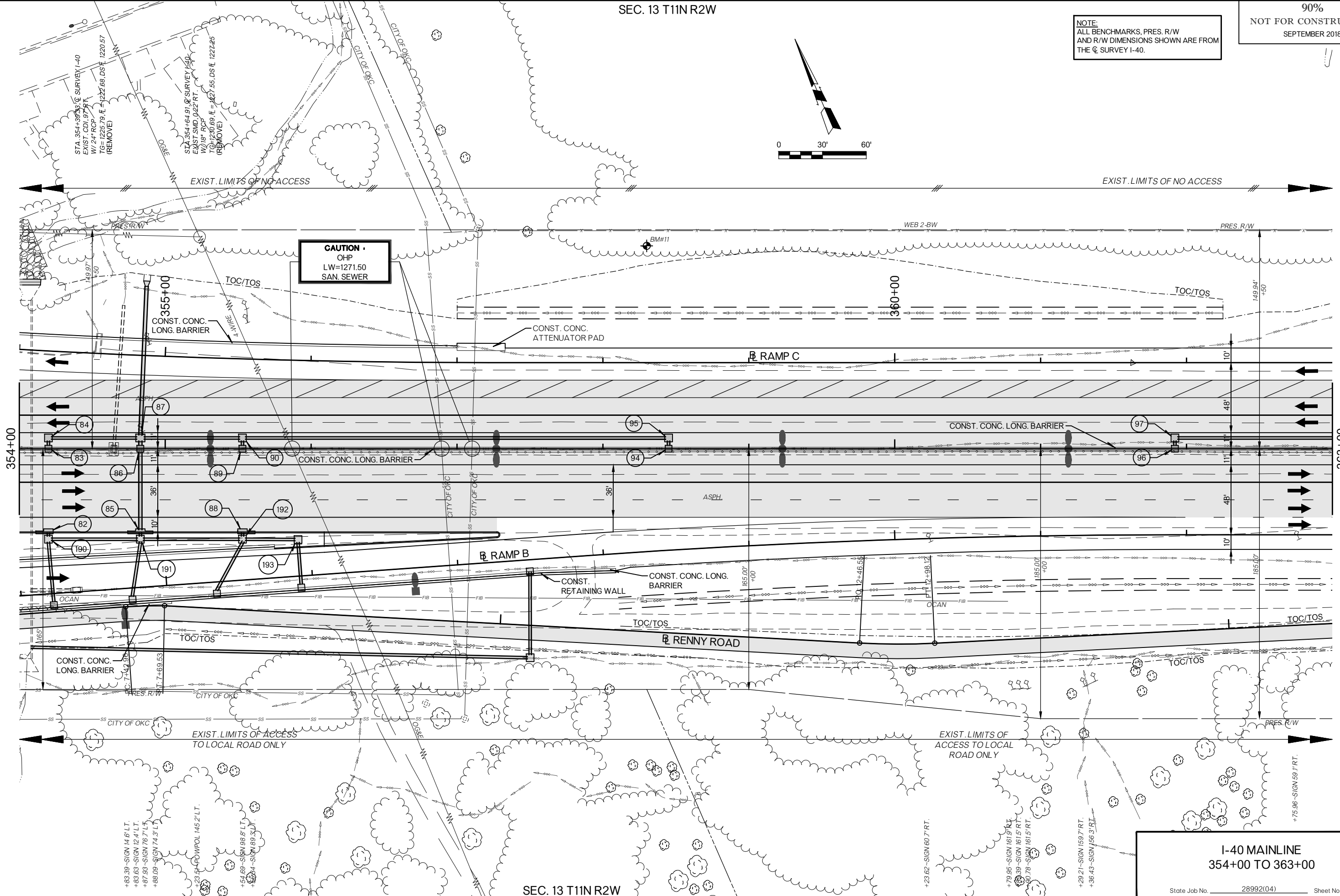
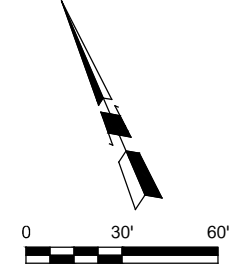
I-40 MAINLINE-EASTBOUND
336+00 TO 345+00

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

SEC. 13 T11N R2W

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE C SURVEY I-40.

90%
NOT FOR CONSTRUCTION
SEPTEMBER 2018



CAUTION
OHP
LW=1271.50
SAN. SEWER

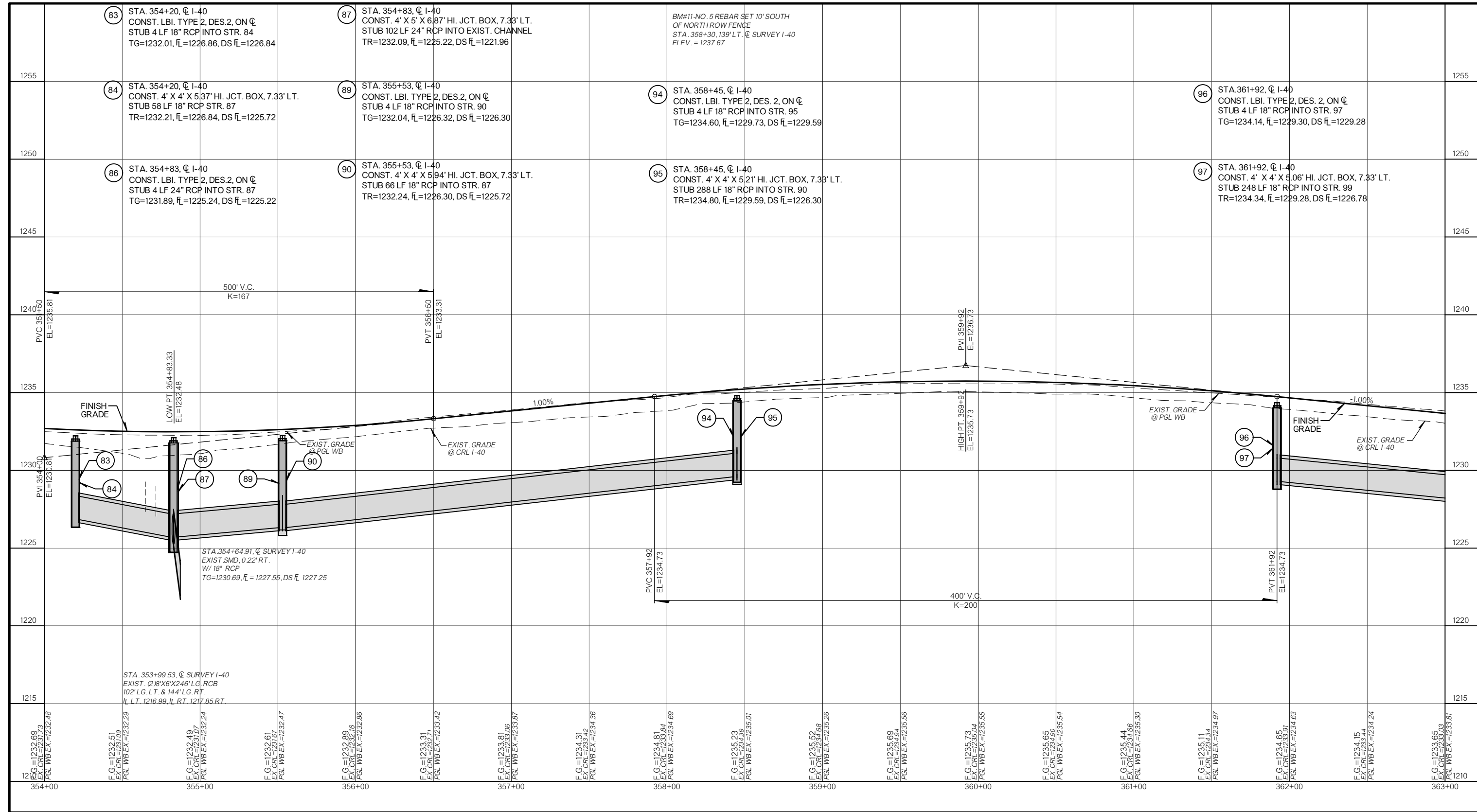
**I-40 MAINLINE
354+00 TO 363+00**

+83.39-SIGN 14.6' LT.
+83.63-SIGN 12.4' LT.
+87.53-SIGN 76.7' LT.
+88.09-SIGN 74.3' LT.
+23.51-PO WPOL 145.2' LT.
+54.69-SIGN 98.8' LT.
+52.24-SIGN 89.3' LT.

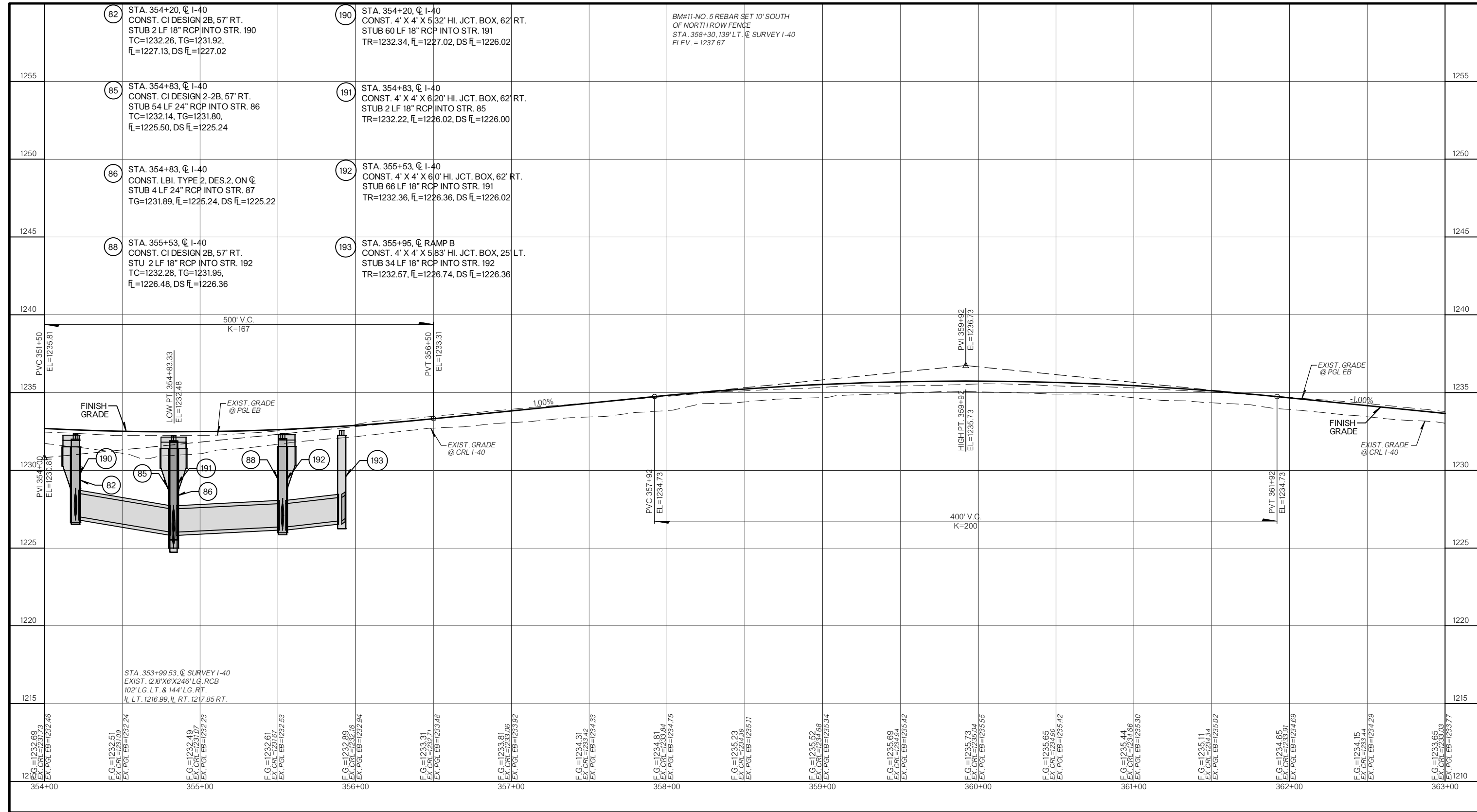
+23.62-SIGN 60.7' RT.
+79.95-SIGN 161.9' RT.
+83.39-SIGN 161.5' RT.
+90.78-SIGN 161.5' RT.
+29.21-SIGN 159.7' RT.
+36.43-SIGN 156.3' RT.

SEC. 13 T11N R2W

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

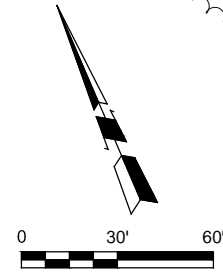


I-40 MAINLINE-WESTBOUND
354+00 TO 363+00



I-40 MAINLINE-EASTBOUND
354+00 TO 363+00

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.



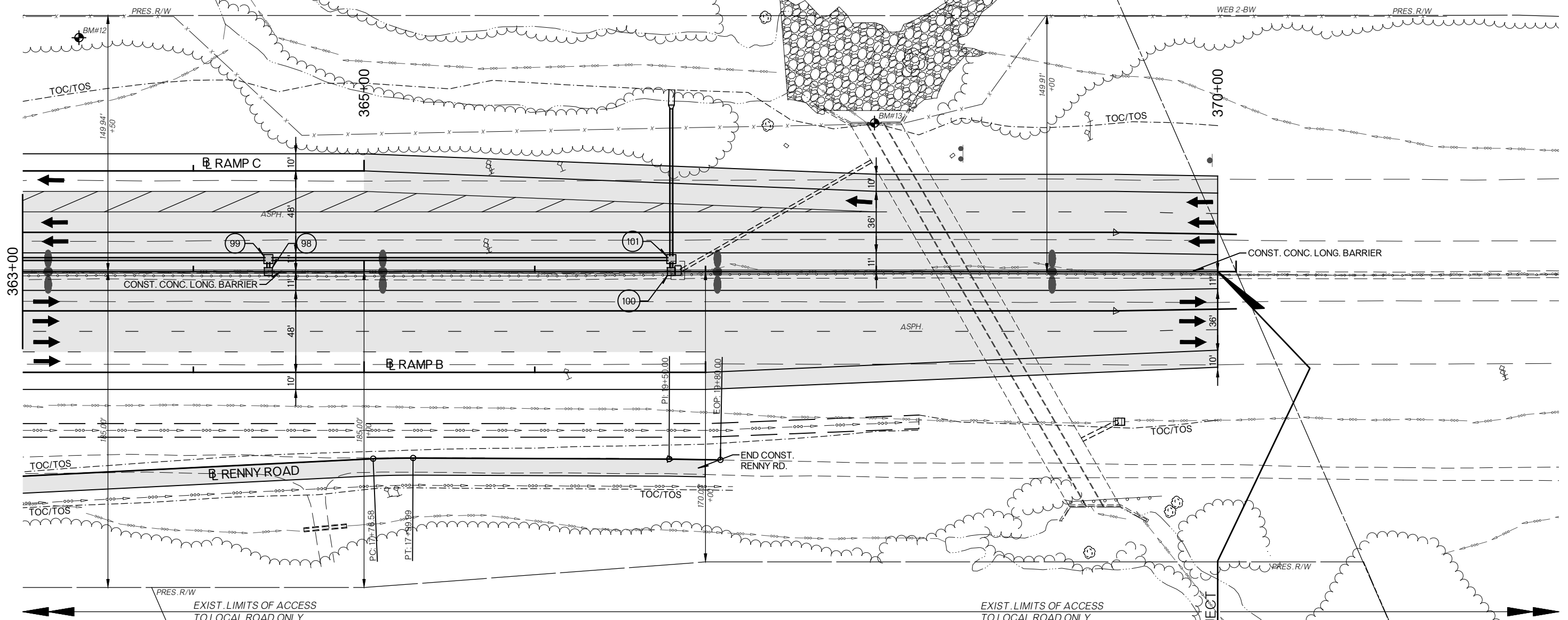
STA. 368+83.90, Q SURVEY I-40
EXIST. SMD, 0.66 LT.
W/4" RCP
+75.4/229.26, E. = 1226.36, DS E. = 1220.7
(REMOVE)

STA. 368+49.22, Q SURVEY I-40
EXIST. 8" X 7" X 28" LG. RCB
87" LG. LT. & 138" LG. RT.
E. LT. 7215.00, E. RT. 1215.79

STA. 369+42.65, Q I-40
EXIST. CDI, 86 RT.
W/24" X 24" RCP
TG = 1223.88, E. = 1220.93, DS E. = 1219.97

EXIST. LIMITS OF NO ACCESS

EXIST. LIMITS OF NO ACCESS



363+00

365+00

370+00

STA. 370+00 - END PROJECT

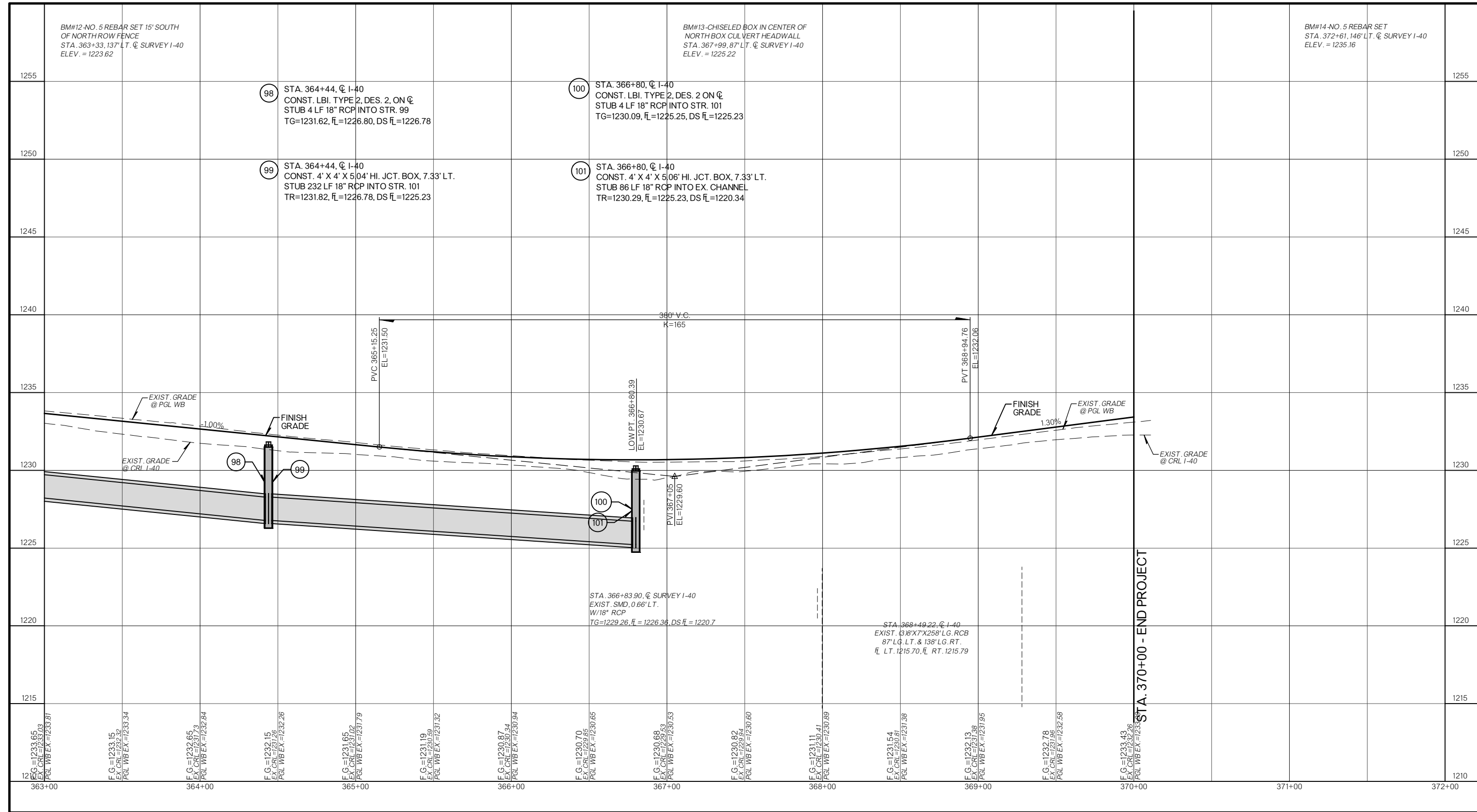
EXIST. LIMITS OF ACCESS
TO LOCAL ROAD ONLY

EXIST. LIMITS OF ACCESS
TO LOCAL ROAD ONLY

+39.93 - SIGN 128.87 RT.
+46.52 - SIGN 128.31 RT.
+72.08 - SIGN 141.11 LT.
+72.09 - SIGN 16.91 LT.
+73.40 - SIGN 60.21 LT.
+73.63 - SIGN 42.51 LT.

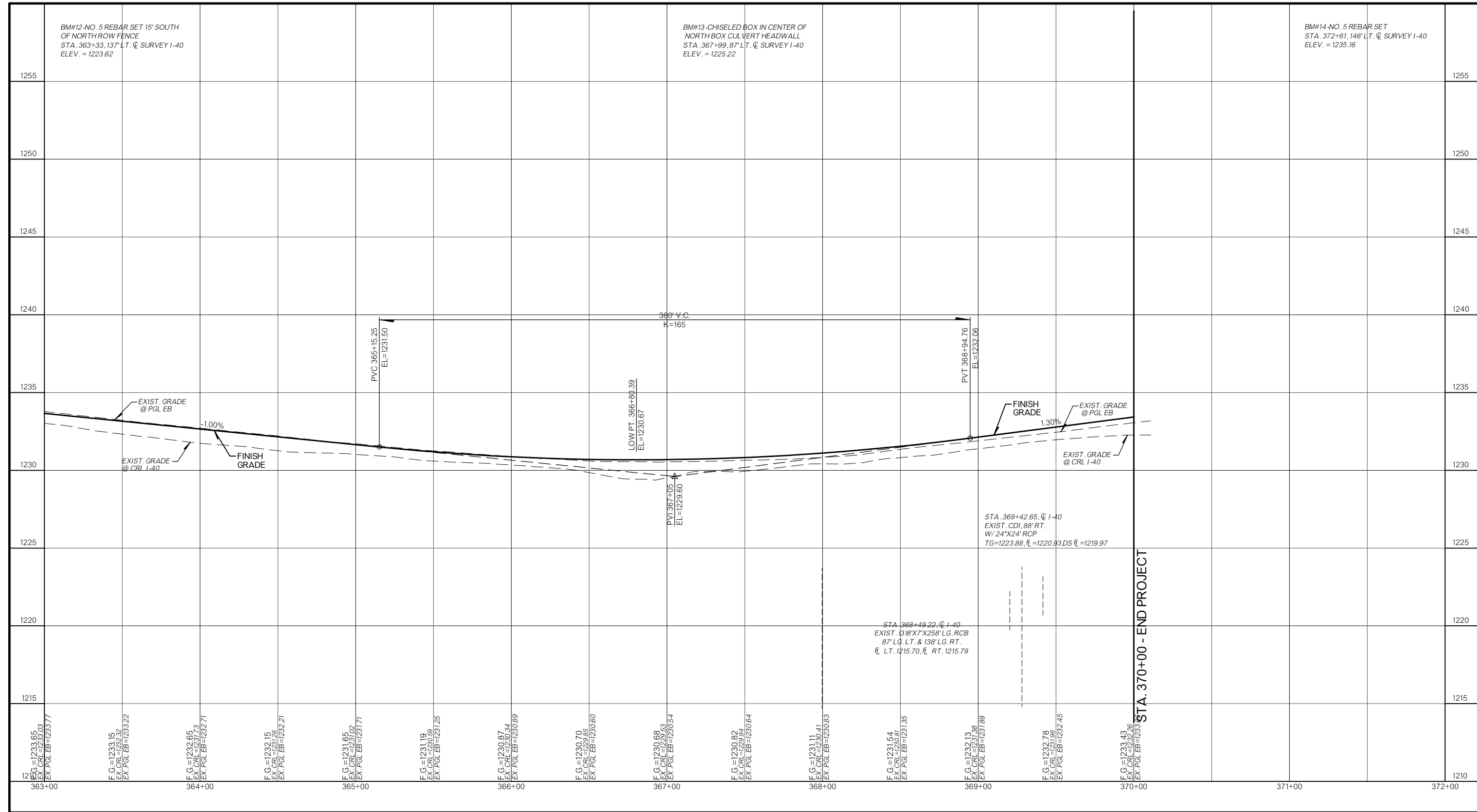
+15.32 - SIGN 61.91 LT.
+18.96 - SIGN 59.8 RT.

+24.08 - SIGN 80.11 LT.
+24.11 - SIGN 90.91 LT.



STA. 370+00 - END PROJECT

I-40 MAINLINE-WESTBOUND
363+00 TO EOP

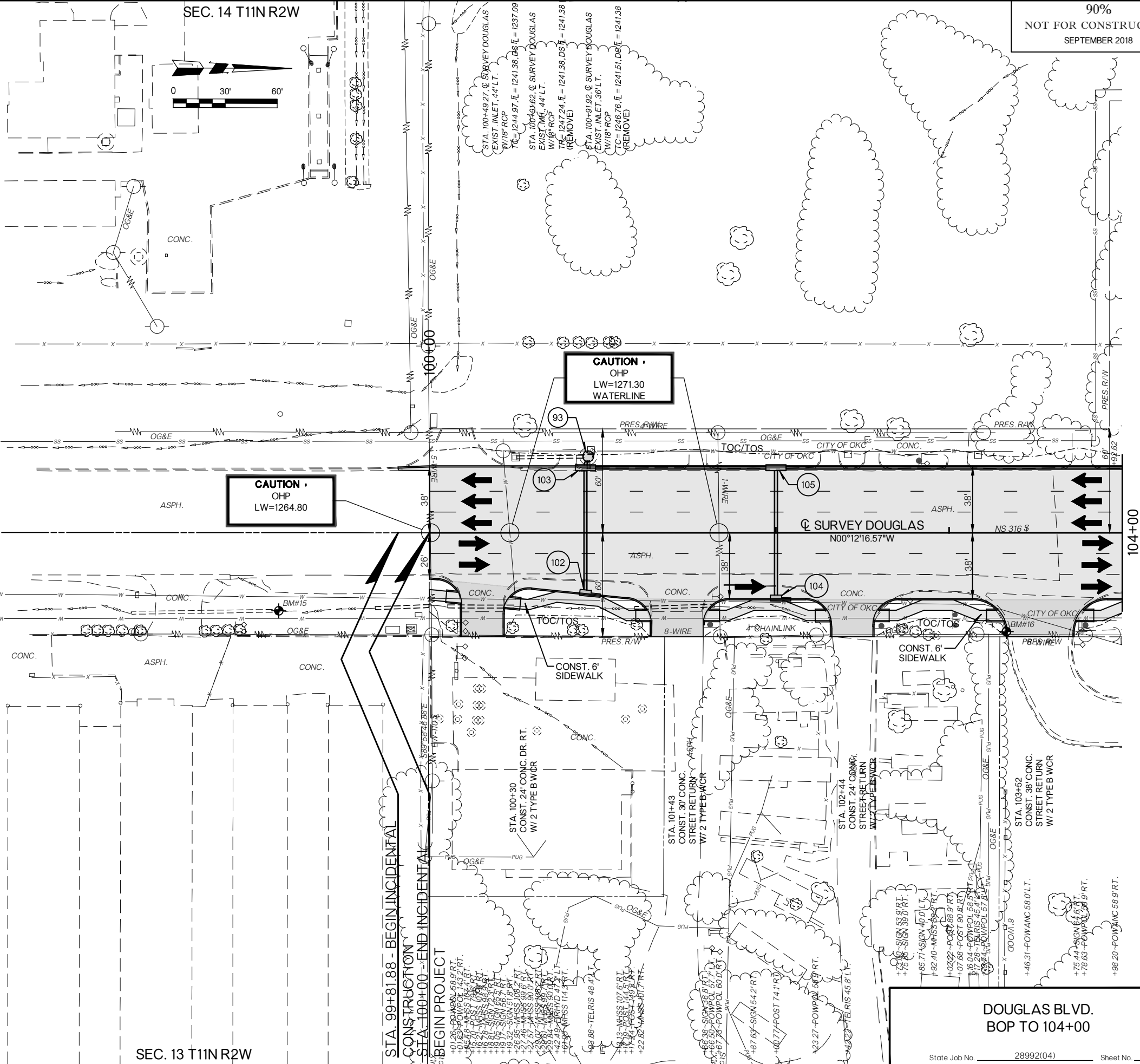


I-40 MAINLINE-EASTBOUND
363+00 TO EOP

SEC. 14 T11N R2W

SEC. 13 T11N R2W

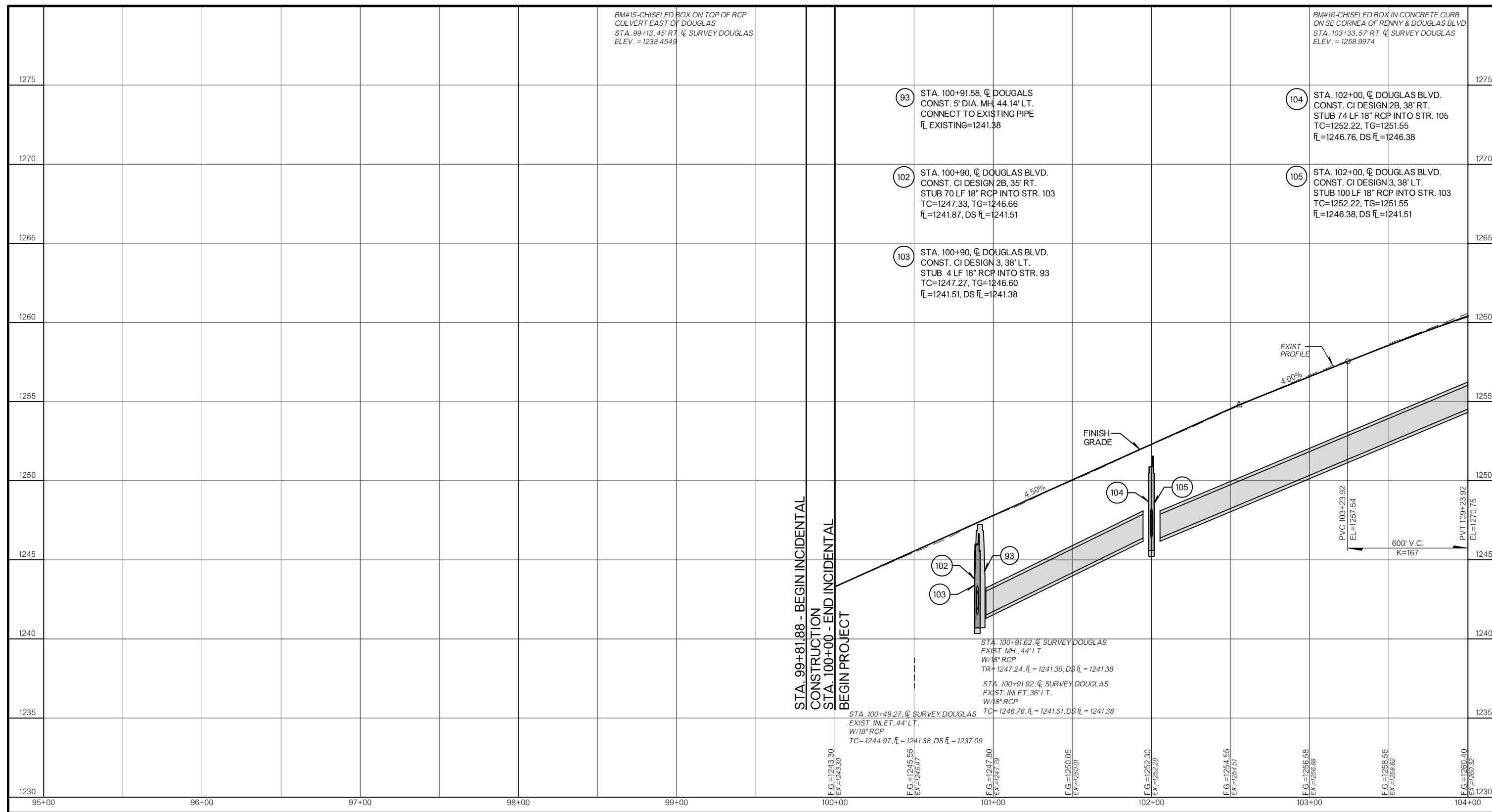
NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY DOUGLAS.



CAUTION -
OHP
LW=1271.30
WATERLINE

CAUTION -
OHP
LW=1264.80

DOUGLAS BLVD.
BOP TO 104+00



BM#15-CHISELED BOX ON TOP OF RCP
CULVERT EAST OF DOUGLAS
STA. 99+13, 45' RT. @ SURVEY DOUGLAS
ELEV. = 1238.4549

BM#16-CHISELED BOX IN CONCRETE CURB
ON SE CORNER OF RENNY & DOUGLAS BLVD
STA. 103+33, 57' RT. @ SURVEY DOUGLAS
ELEV. = 1258.9974

93 STA. 100+91.58, @ DOUGLAS
CONST. 5' DIA. MH, 44.14' LT.
CONNECT TO EXISTING PIPE
FL EXISTING=1241.38

104 STA. 102+00, @ DOUGLAS BLVD.
CONST. CI DESIGN 2B, 38' RT.
STUB 74 LF 18" RCP INTO STR. 105
TC=1252.22, TG=1251.55
FL=1246.76, DS FL=1246.38

102 STA. 100+90, @ DOUGLAS BLVD.
CONST. CI DESIGN 2B, 35' RT.
STUB 70 LF 18" RCP INTO STR. 103
TC=1247.33, TG=1246.66
FL=1241.87, DS FL=1241.51

105 STA. 102+00, @ DOUGLAS BLVD.
CONST. CI DESIGN 3, 38' LT.
STUB 100 LF 18" RCP INTO STR. 103
TC=1252.22, TG=1251.55
FL=1246.38, DS FL=1241.51

103 STA. 100+90, @ DOUGLAS BLVD.
CONST. CI DESIGN 3, 38' LT.
STUB 4 LF 18" RCP INTO STR. 93
TC=1247.27, TG=1246.60
FL=1241.51, DS FL=1241.38

STA. 99+81.88 - BEGIN INCIDENTAL
CONSTRUCTION
STA. 100+00 - END INCIDENTAL
BEGIN PROJECT

STA. 100+91.62, @ SURVEY DOUGLAS
EXIST. MH., 44' LT.
W/18" RCP
TR= 1247.24, FL = 1241.38, DS FL = 1241.38

STA. 100+91.92, @ SURVEY DOUGLAS
EXIST. INLET, 36' LT.
W/18" RCP
TC= 1246.76, FL = 1241.51, DS FL = 1241.38

STA. 100+49.27, @ SURVEY DOUGLAS
EXIST. INLET, 44' LT.
W/18" RCP
TC= 1244.97, FL = 1241.38, DS FL = 1237.09

FG = 1243.30
EX = 1243.30

FG = 1245.55
EX = 1245.47

FG = 1247.80
EX = 1247.79

FG = 1250.05
EX = 1250.01

FG = 1252.30
EX = 1252.28

FG = 1254.55
EX = 1254.51

FG = 1256.58
EX = 1256.68

FG = 1258.56
EX = 1258.62

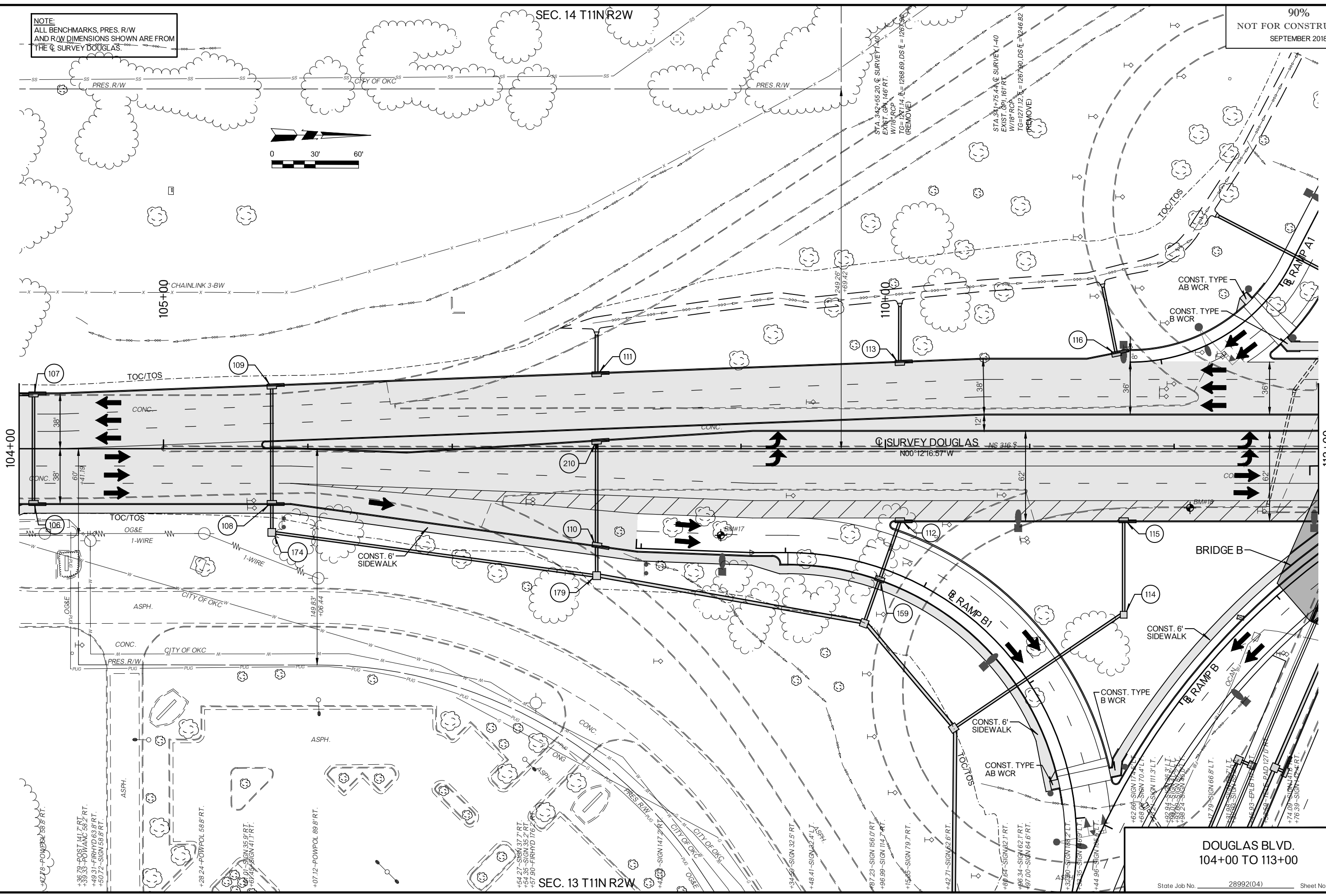
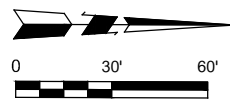
FG = 1260.40
EX = 1260.32

DOUGLAS BLVD.
BOP TO 104+00

SEC. 14 T11N R2W

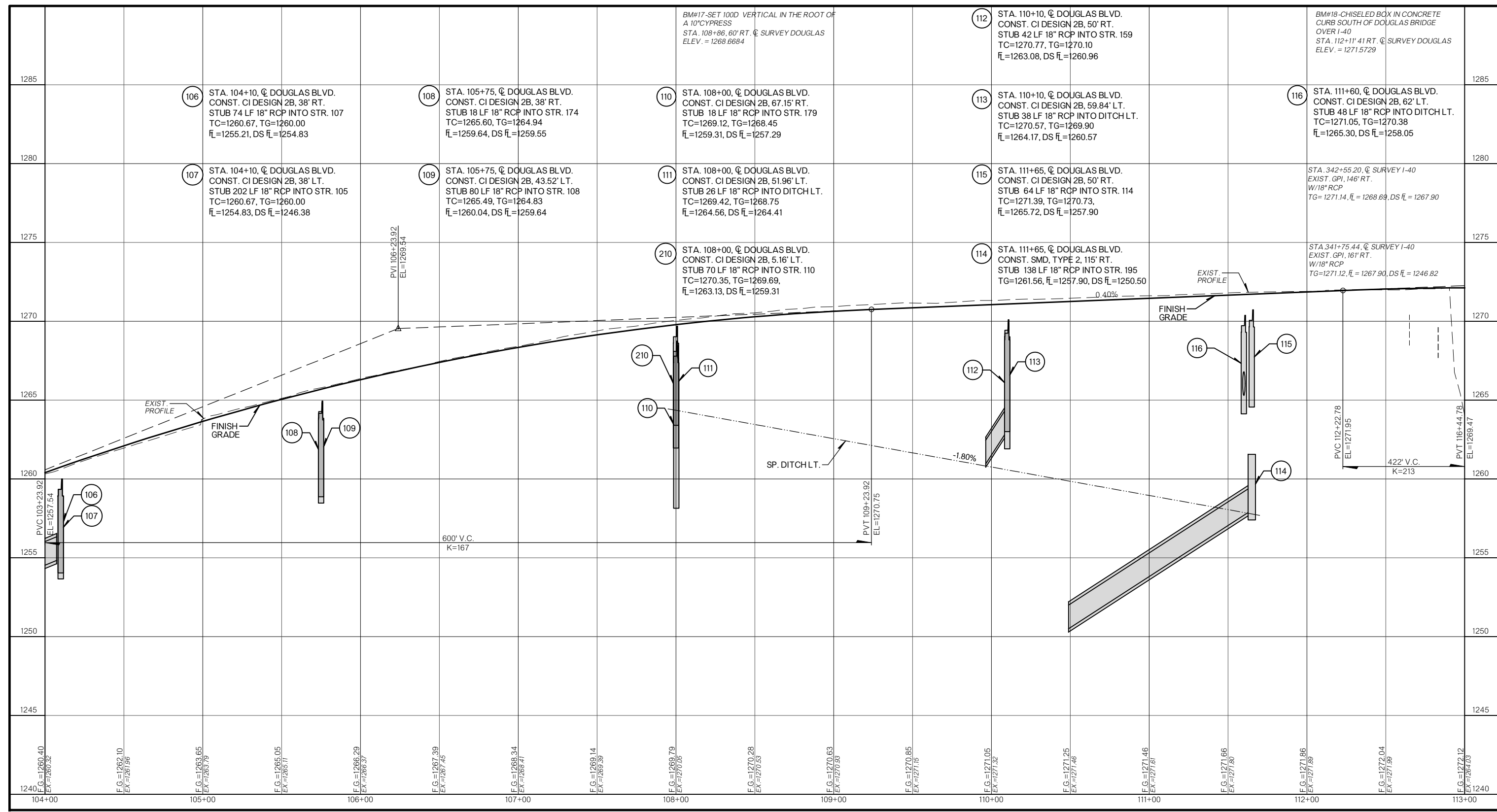
90%
NOT FOR CONSTRUCTION
SEPTEMBER 2018

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE C SURVEY DOUGLAS.



DOUGLAS BLVD.
104+00 TO 113+00

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



DOUGLAS BLVD.
104+00 TO 113+00

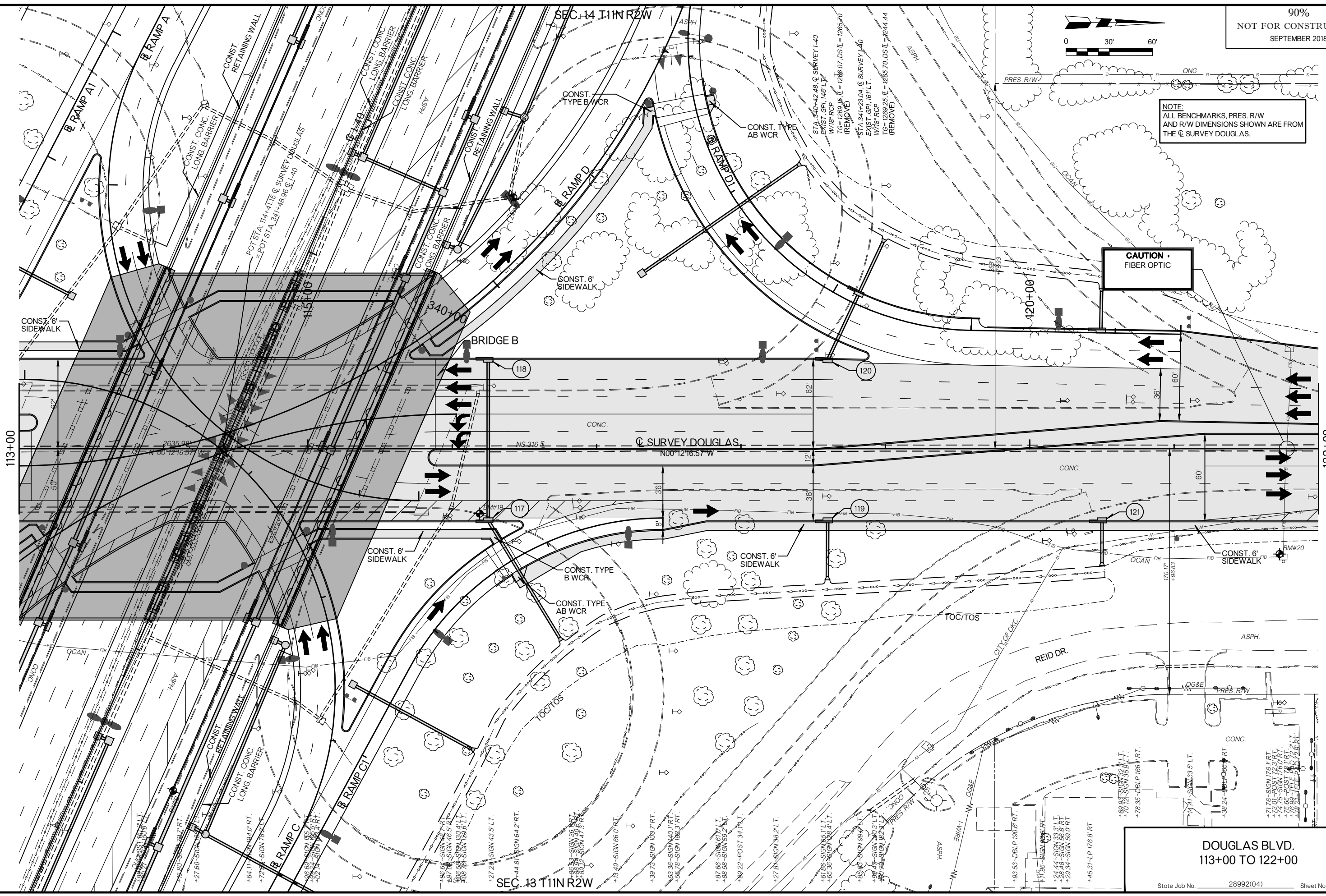
State Job No. 28992(04) Sheet No. R079

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE

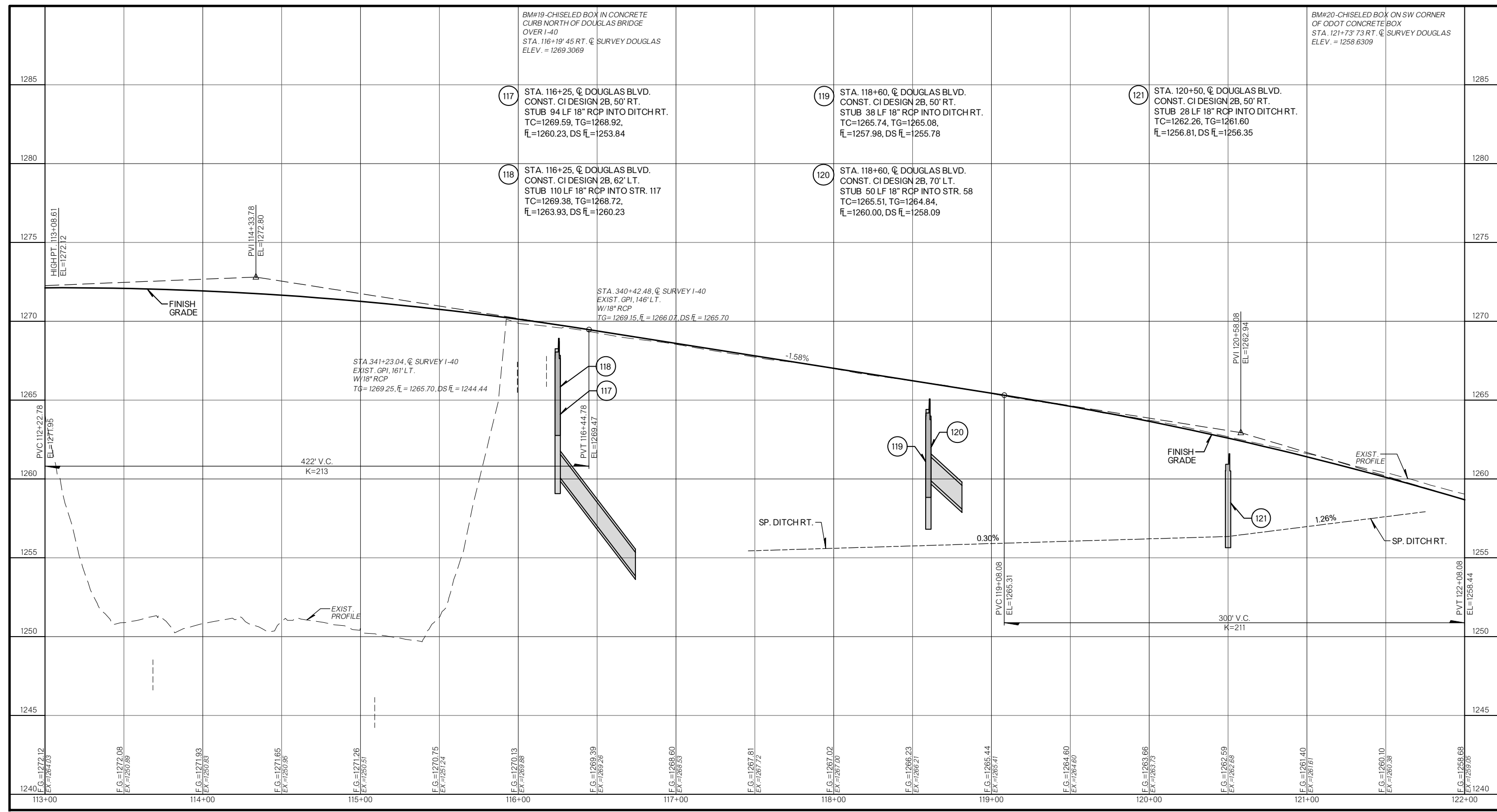


NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE \odot SURVEY DOUGLAS.

CAUTION
FIBER OPTIC

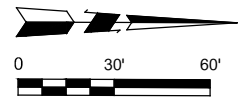


DOUGLAS BLVD.
113+00 TO 122+00

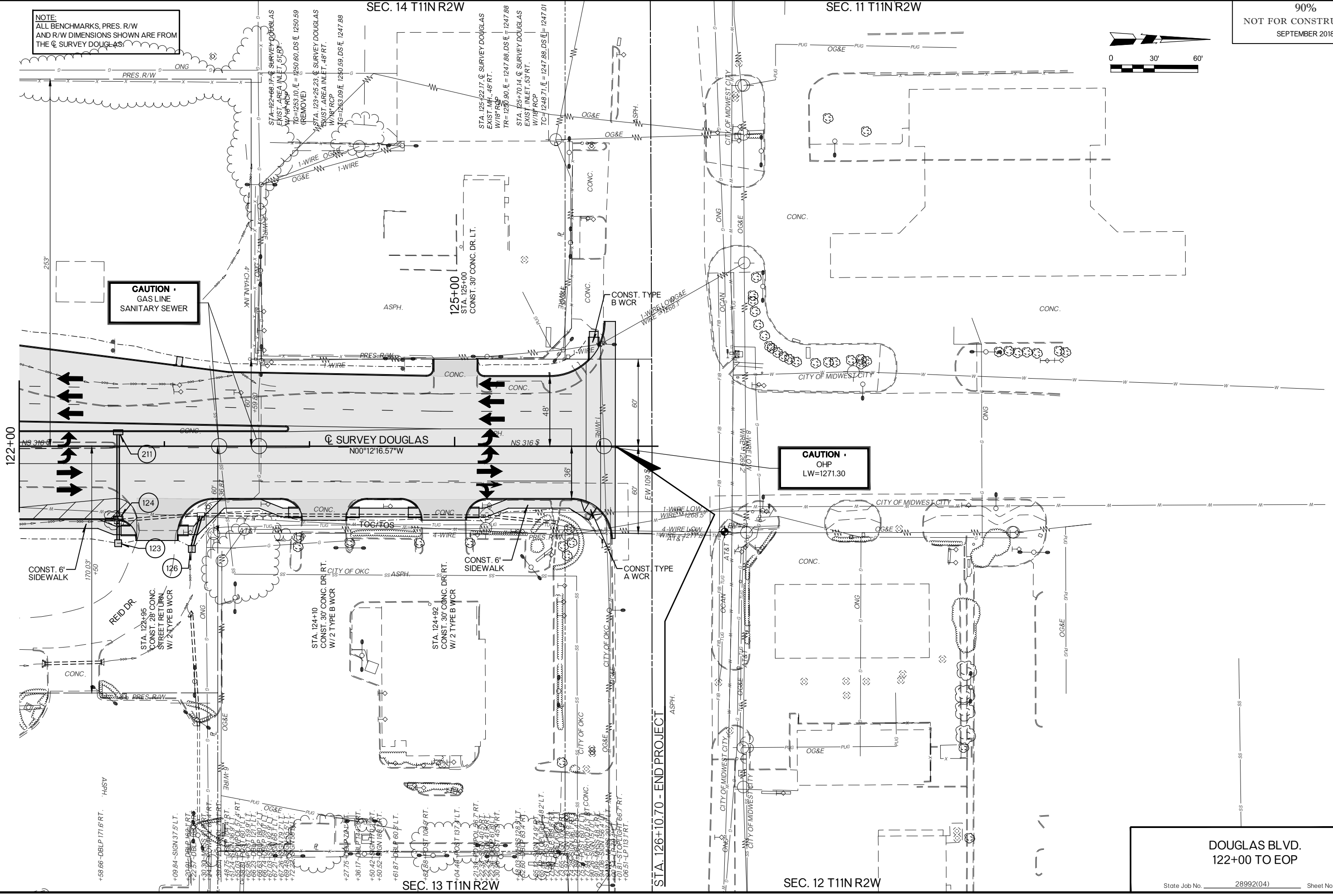


DOUGLAS BLVD.
113+00 TO 122+00

OKLAHOMA COUNTY 1-40 & DOUGLAS BLVD. INTERCHANGE



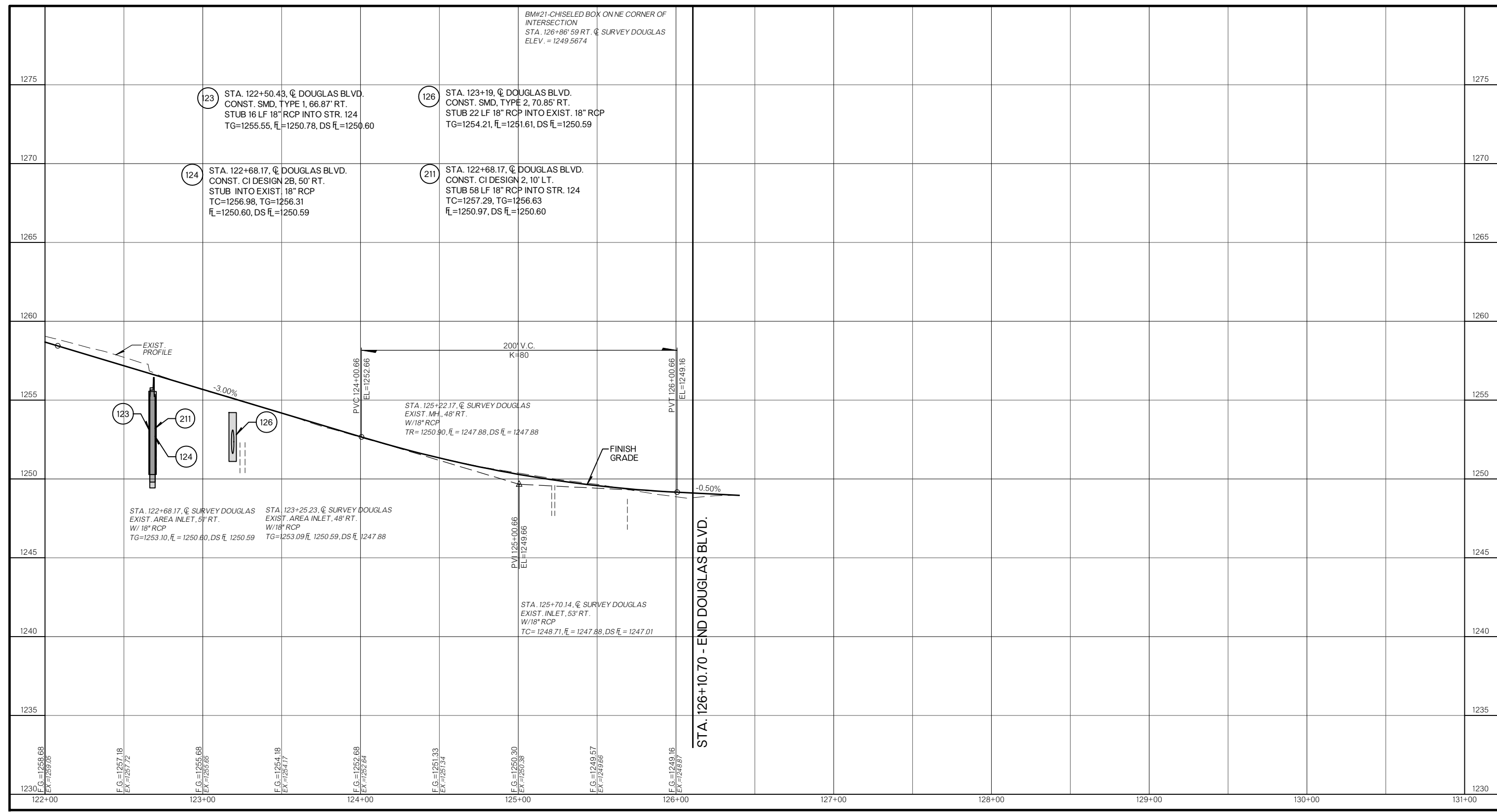
NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY DOUGLAS



CAUTION
GAS LINE
SANITARY SEWER

CAUTION
OHP
LW=1271.30

DOUGLAS BLVD.
122+00 TO EOP

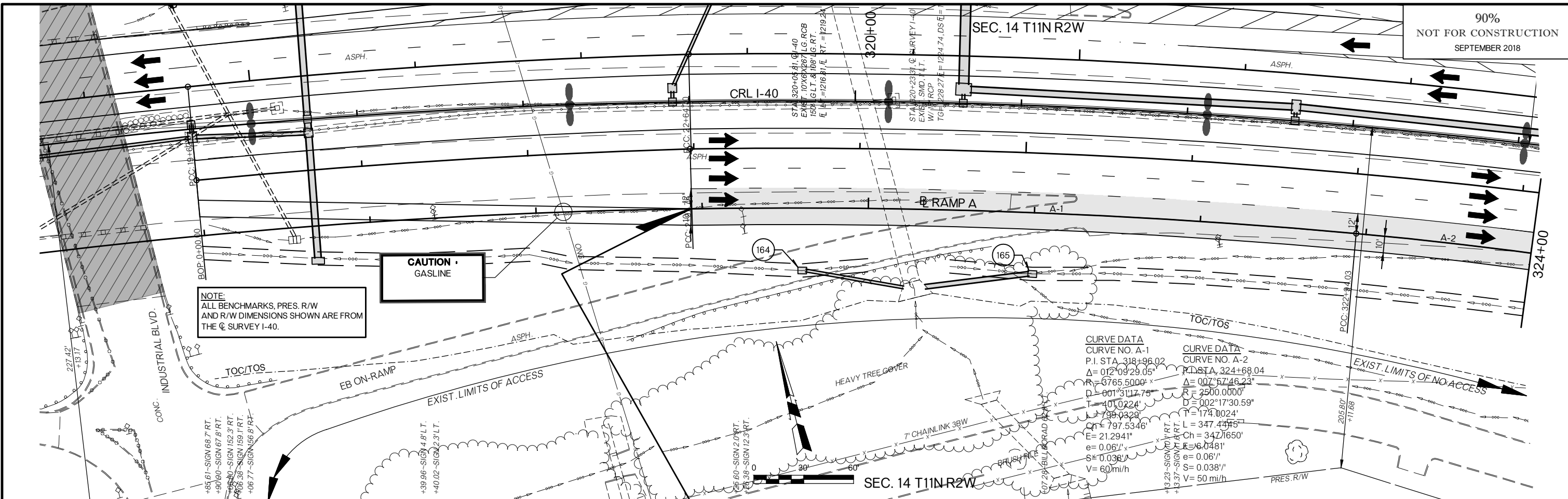


DOUGLAS BLVD.
122+00 TO EOP

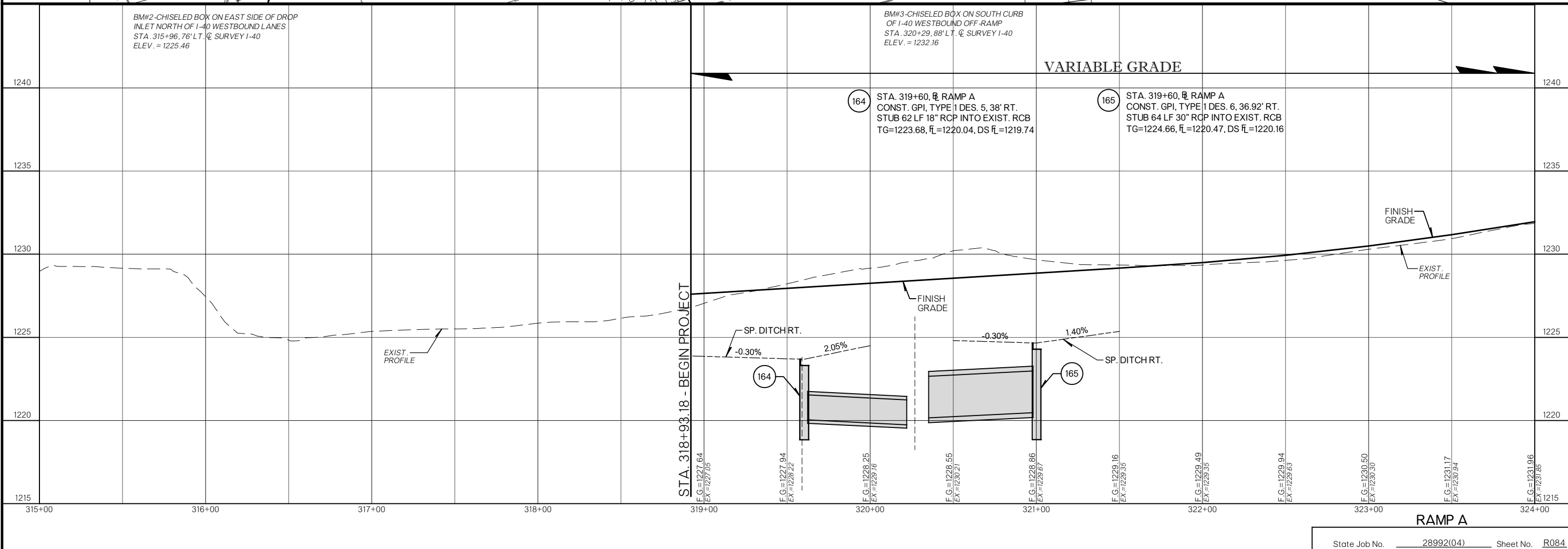
State Job No. 28992(04) Sheet No. R083

OKLAHOMA COUNTY
I-40 & DOUGLAS BLVD. INTERCHANGE

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SEPTEMBER 2018



CURVE DATA	
CURVE NO. A-1	CURVE NO. A-2
P.I. STA. 318+96.02	P.I. STA. 324+68.04
$\Delta = 012^{\circ}09'29.05''$	$\Delta = 007^{\circ}57'46.23''$
$R = 6765.5000'$	$R = 3500.0000'$
$D = 001^{\circ}31'17.75''$	$D = 002^{\circ}17'30.59''$
$T = 401.0224'$	$T = 174.0024'$
$Ch = 797.5346'$	$Ch = 347.4445'$
$E = 21.2941'$	$E = 6.0481'$
$S = 0.061\%$	$S = 0.038\%$
$V = 60 \text{ mi/h}$	$V = 50 \text{ mi/h}$



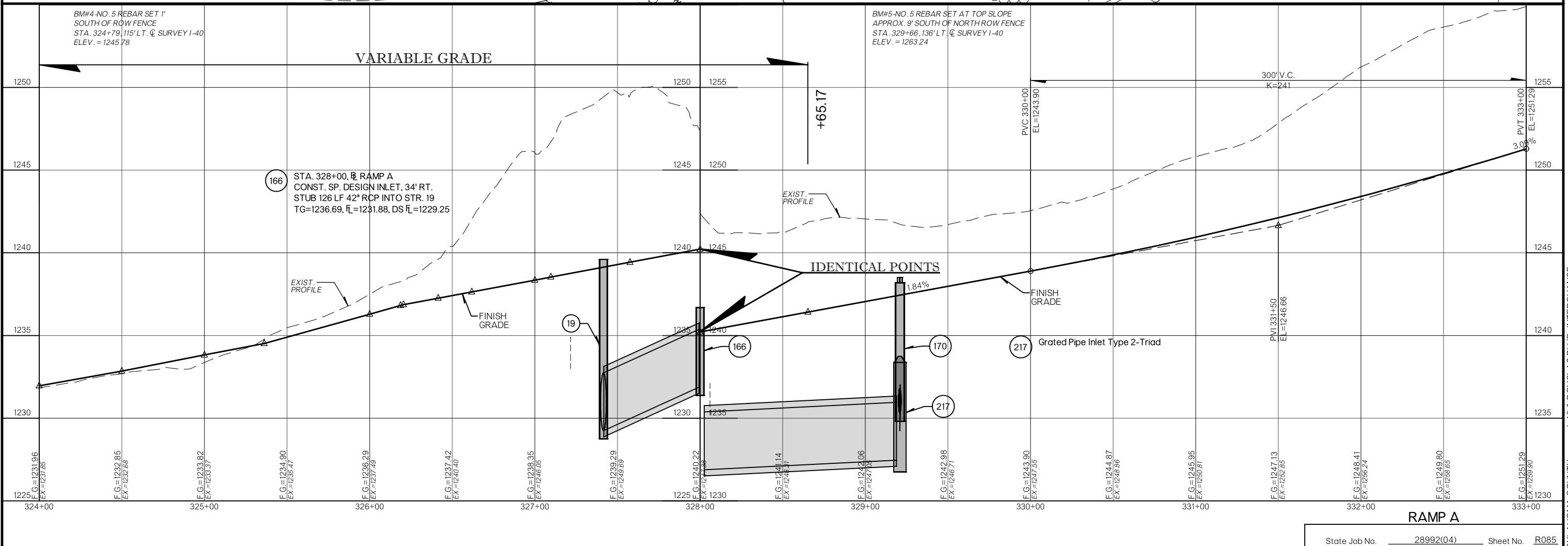
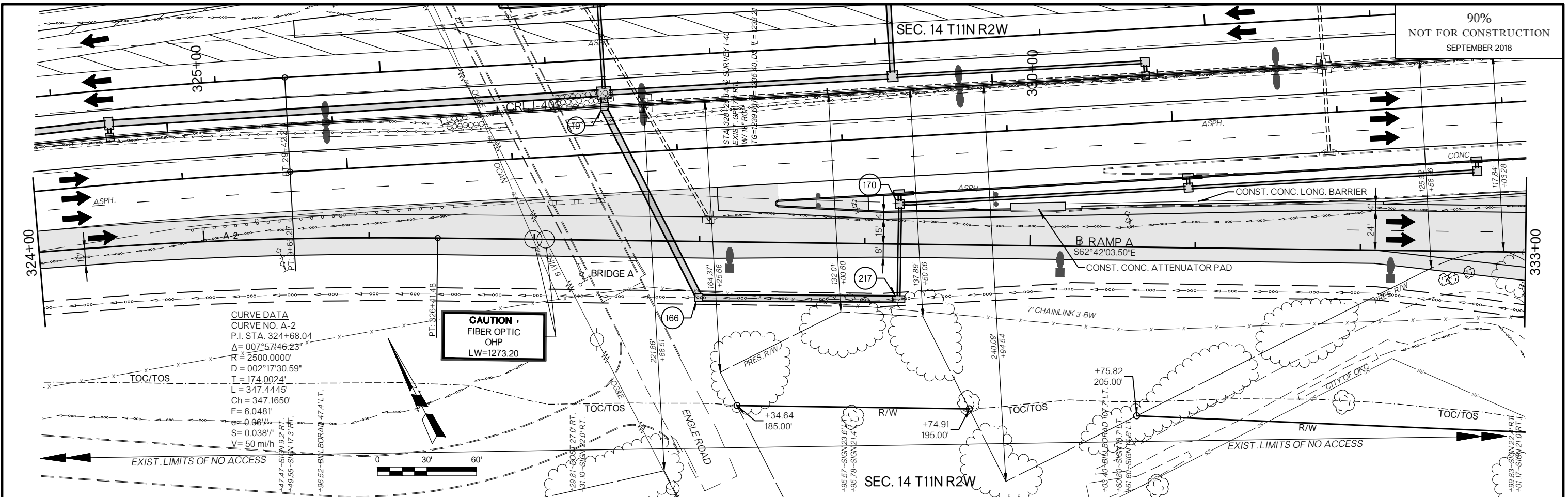
BM#2-CHISELED BOX ON EAST SIDE OF DROP INLET NORTH OF I-40 WESTBOUND LANES
STA. 315+96.76' LT. Q SURVEY I-40
ELEV. = 1225.46

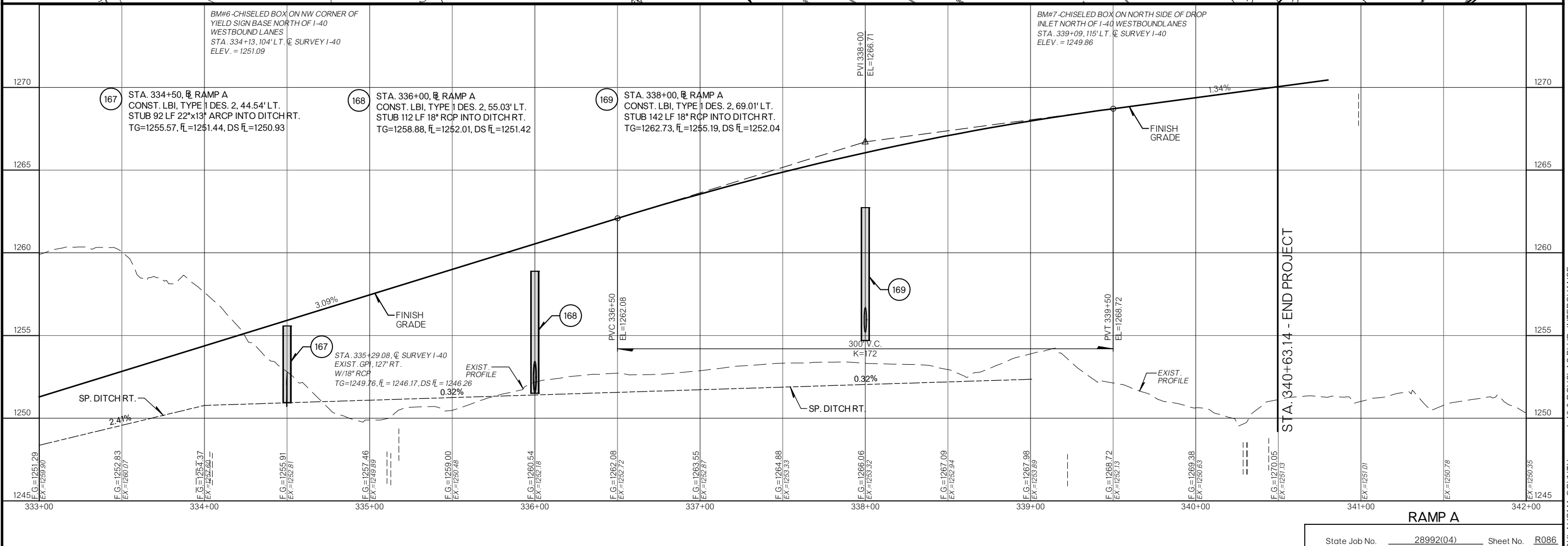
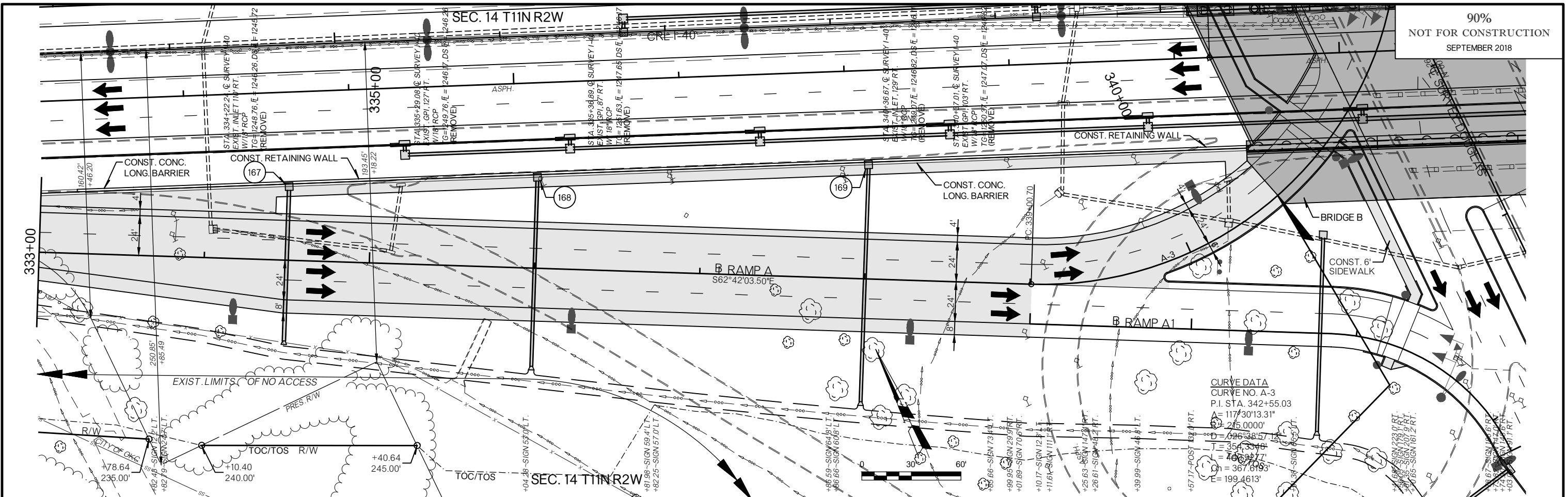
BM#3-CHISELED BOX ON SOUTH CURB OF I-40 WESTBOUND OFF-RAMP
STA. 320+29.88' LT. Q SURVEY I-40
ELEV. = 1232.16

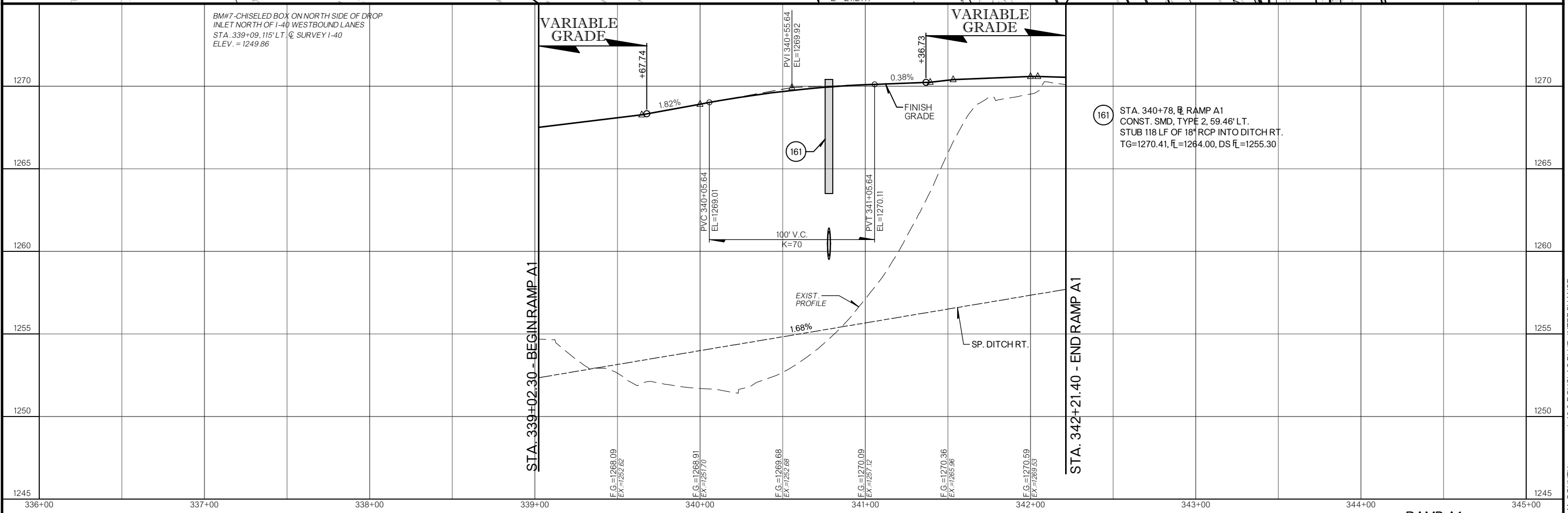
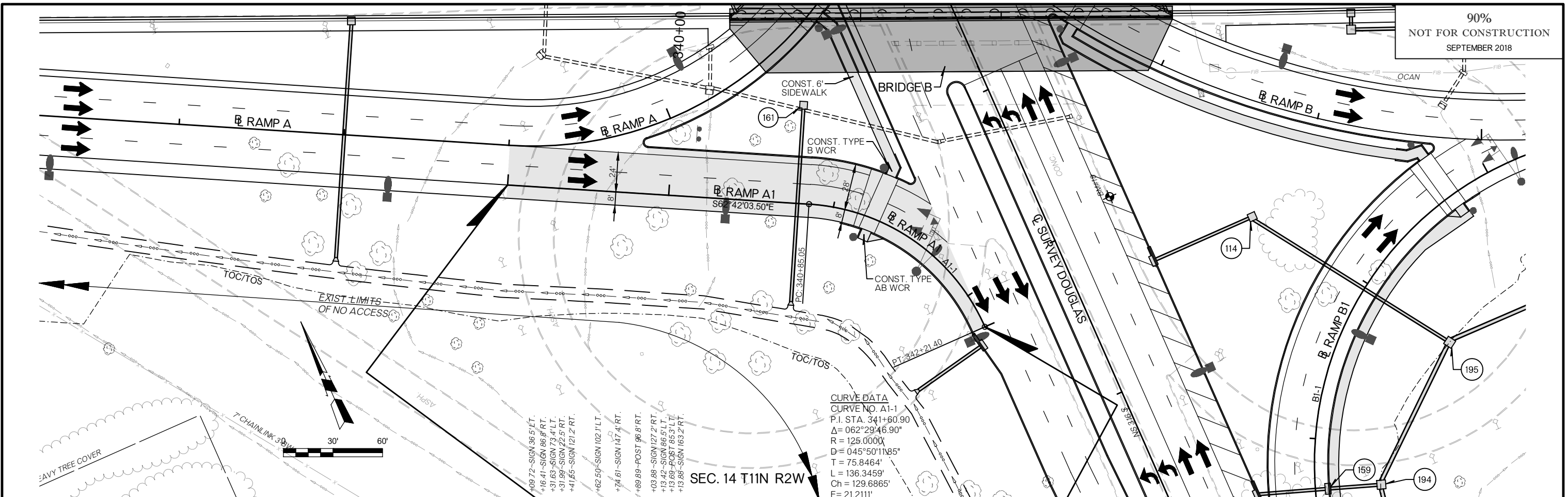
164 STA. 319+60, RAMP A
CONST. GPI, TYPE I DES. 5.38' RT.
STUB 62 LF 18" RCP INTO EXIST. RCB
TG=1223.68, f_l =1220.04, DS f_l =1219.74

165 STA. 319+60, RAMP A
CONST. GPI, TYPE I DES. 6.36' RT.
STUB 64 LF 30" RCP INTO EXIST. RCB
TG=1224.66, f_l =1220.47, DS f_l =1220.16

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE



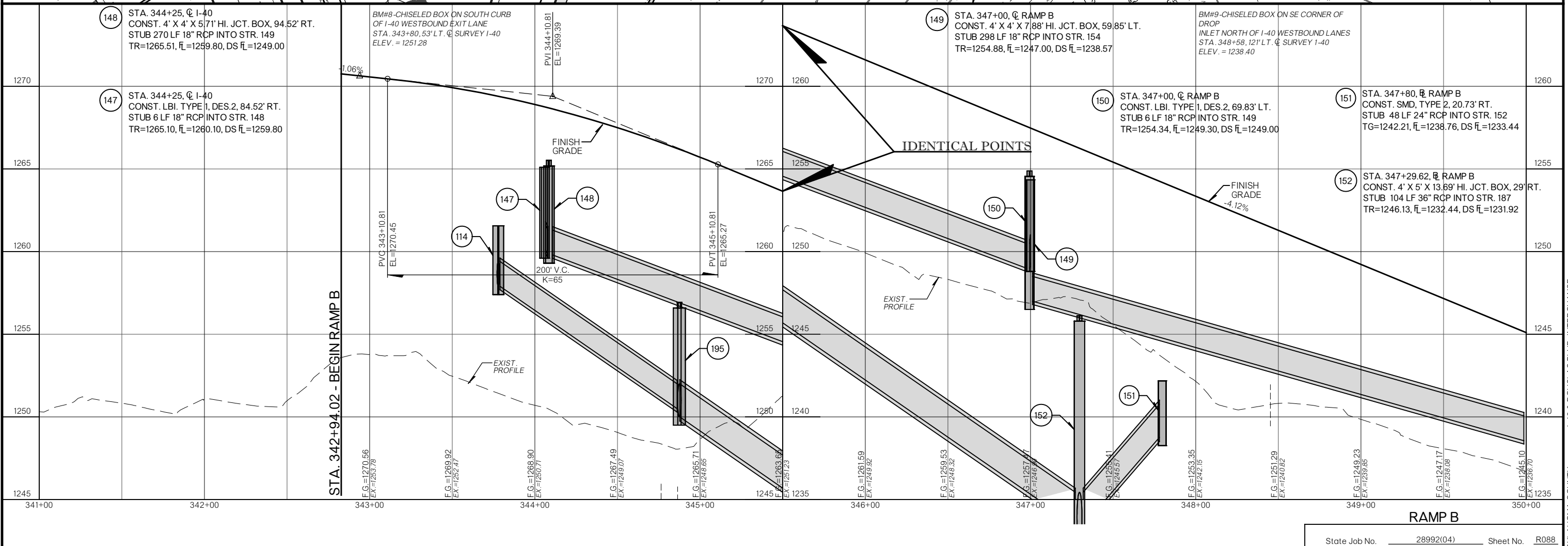
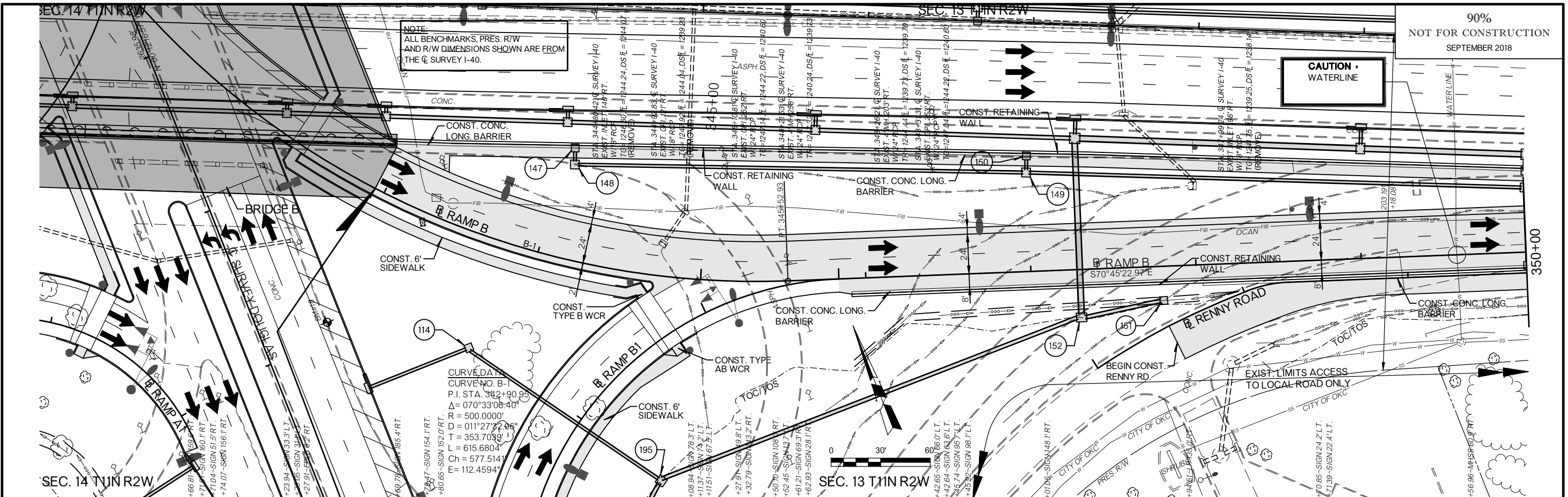




RAMP A1

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.

CAUTION
WATERLINE



148 STA. 344+25, Q I-40
CONST. 4' X 4' X 5'71" HI. JCT. BOX, 94.52' RT.
STUB 270 LF 18" RCP INTO STR. 149
TR=1265.51, FL=1259.80, DS FL=1249.00

147 STA. 344+25, Q I-40
CONST. LBI. TYPE 1, DES. 2, 84.52' RT.
STUB 6 LF 18" RCP INTO STR. 148
TR=1265.10, FL=1260.10, DS FL=1259.80

BM#8-CHISELED BOX ON SOUTH CURB
OF I-40 WESTBOUND EXIT LANE
STA. 343+80, 53' LT. Q SURVEY I-40
ELEV. = 1251.28

149 STA. 347+00, Q RAMP B
CONST. 4' X 4' X 7'88" HI. JCT. BOX, 59.85' LT.
STUB 298 LF 18" RCP INTO STR. 154
TR=1254.88, FL=1247.00, DS FL=1238.57

BM#9-CHISELED BOX ON SE CORNER OF
DROP
INLET NORTH OF I-40 WESTBOUND LANES
STA. 348+58, 121' LT. Q SURVEY I-40
ELEV. = 1238.40

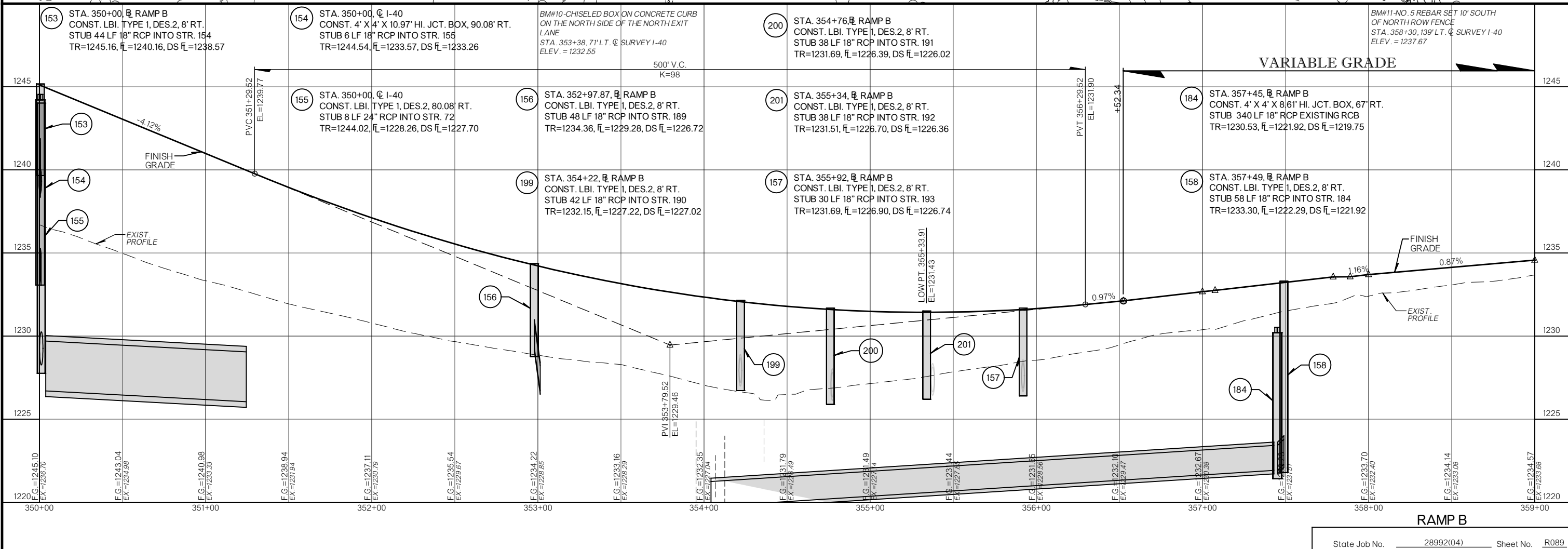
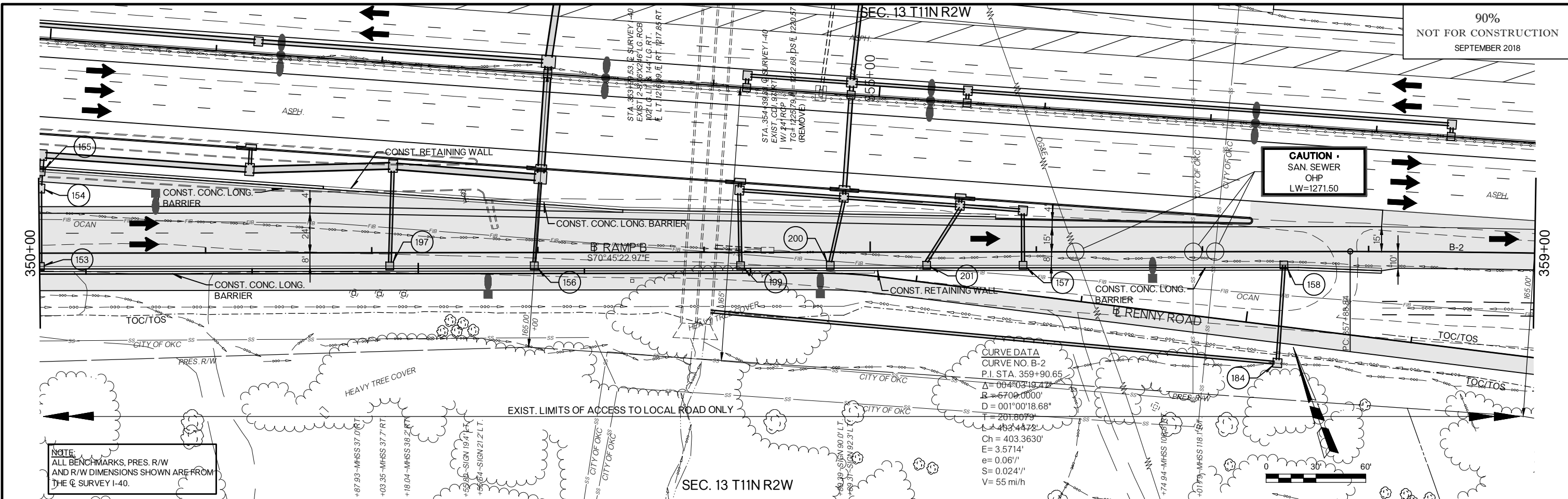
150 STA. 347+00, Q RAMP B
CONST. LBI. TYPE 1, DES. 2, 69.83' LT.
STUB 6 LF 18" RCP INTO STR. 149
TR=1254.34, FL=1249.30, DS FL=1249.00

151 STA. 347+80, Q RAMP B
CONST. SMD, TYPE 2, 20.73' RT.
STUB 48 LF 24" RCP INTO STR. 152
TG=1242.21, FL=1238.76, DS FL=1233.44

152 STA. 347+29.62, Q RAMP B
CONST. 4' X 5' X 13.69" HI. JCT. BOX, 29' RT.
STUB 104 LF 36" RCP INTO STR. 187
TR=1246.13, FL=1232.44, DS FL=1231.92

STA. 342+94.02 - BEGIN RAMP B

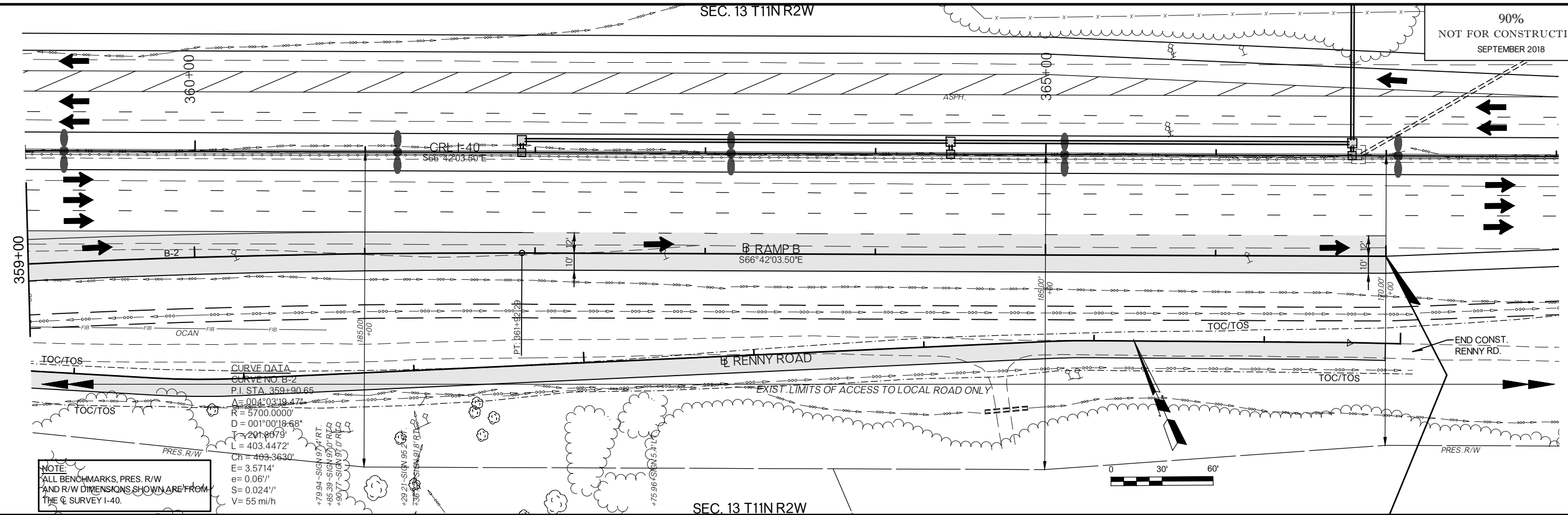
RAMP B



RAMP B

SEC. 13 T11NR2W

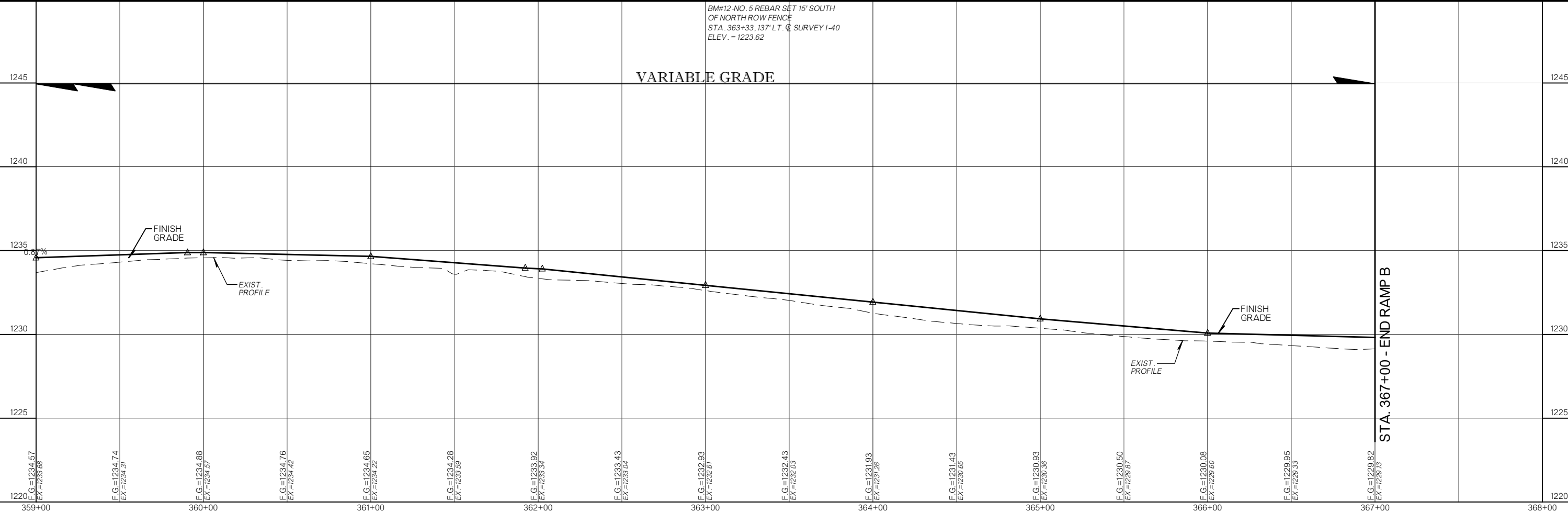
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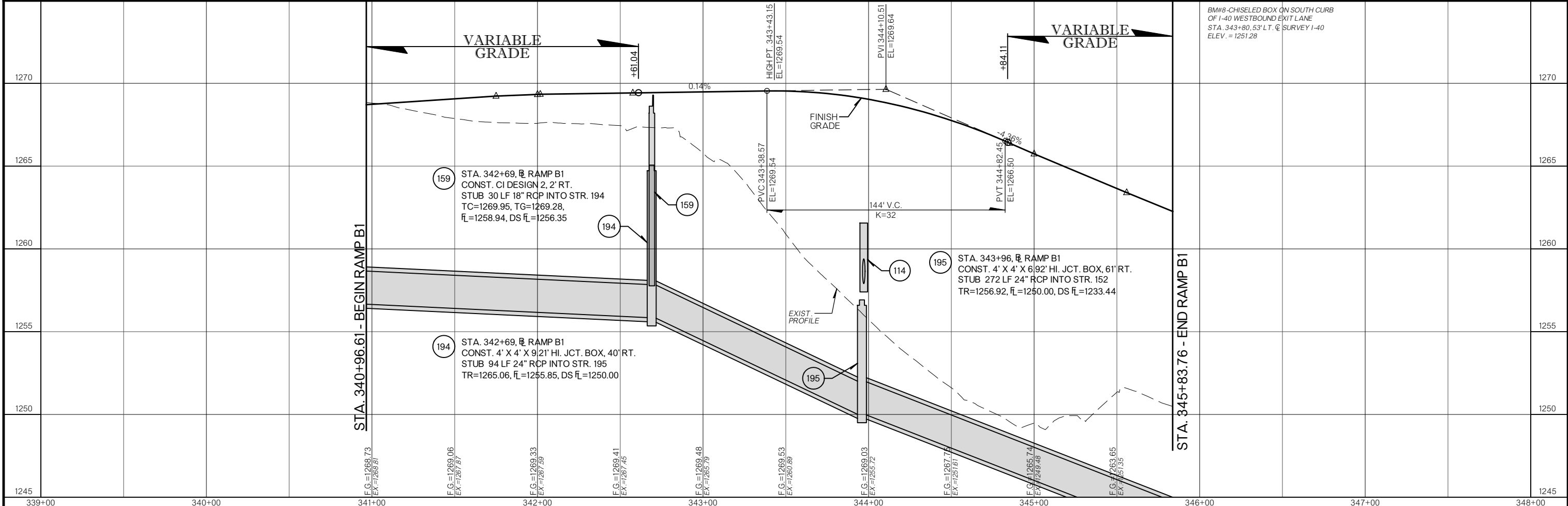
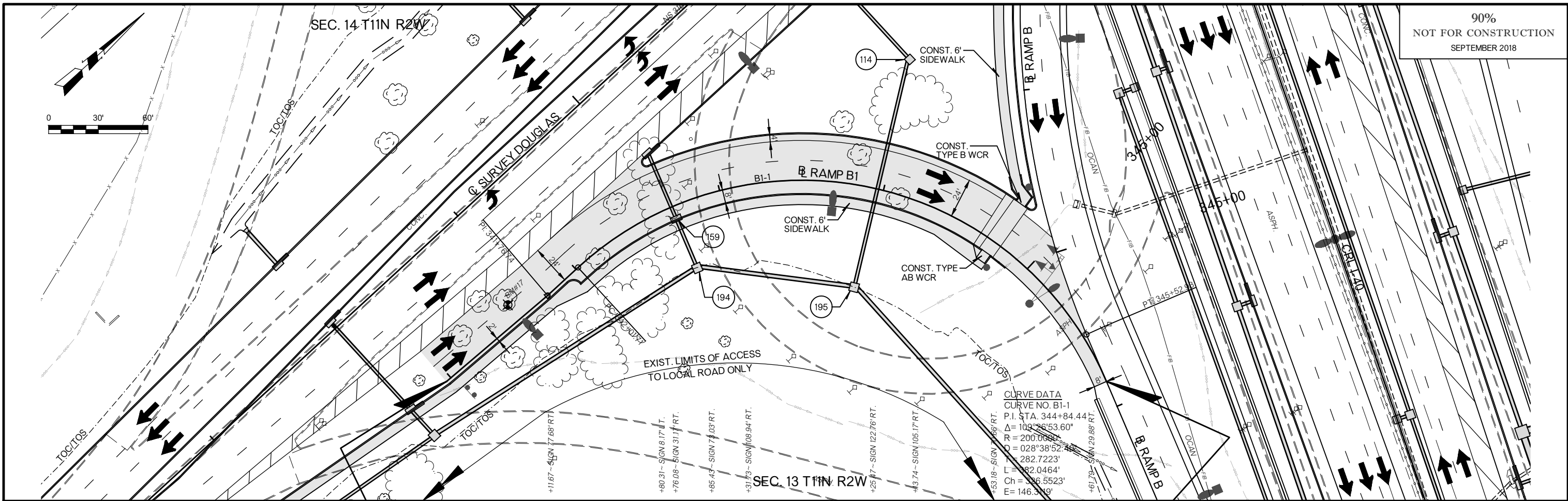
SEC. 13 T11NR2W

BM#12-NO. 5 REBAR SET 15' SOUTH OF NORTH ROW FENCE STA. 363+33, 137' LT. \angle SURVEY I-40 ELEV. = 1223.62

VARIABLE GRADE



RAMP B



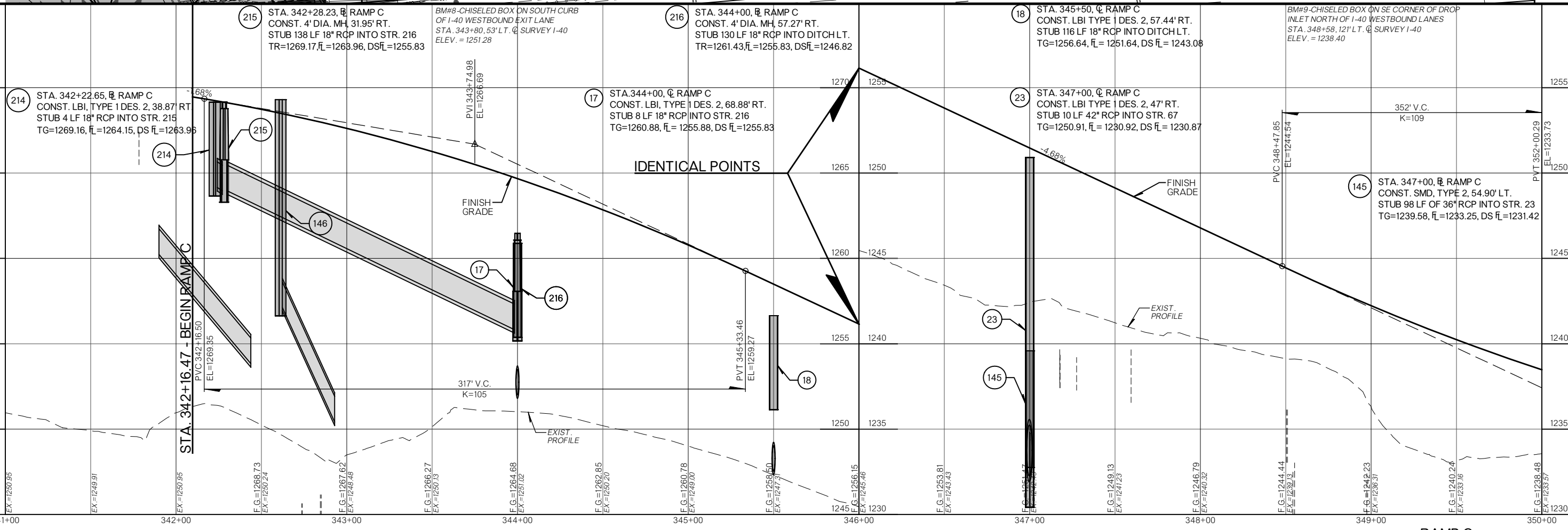
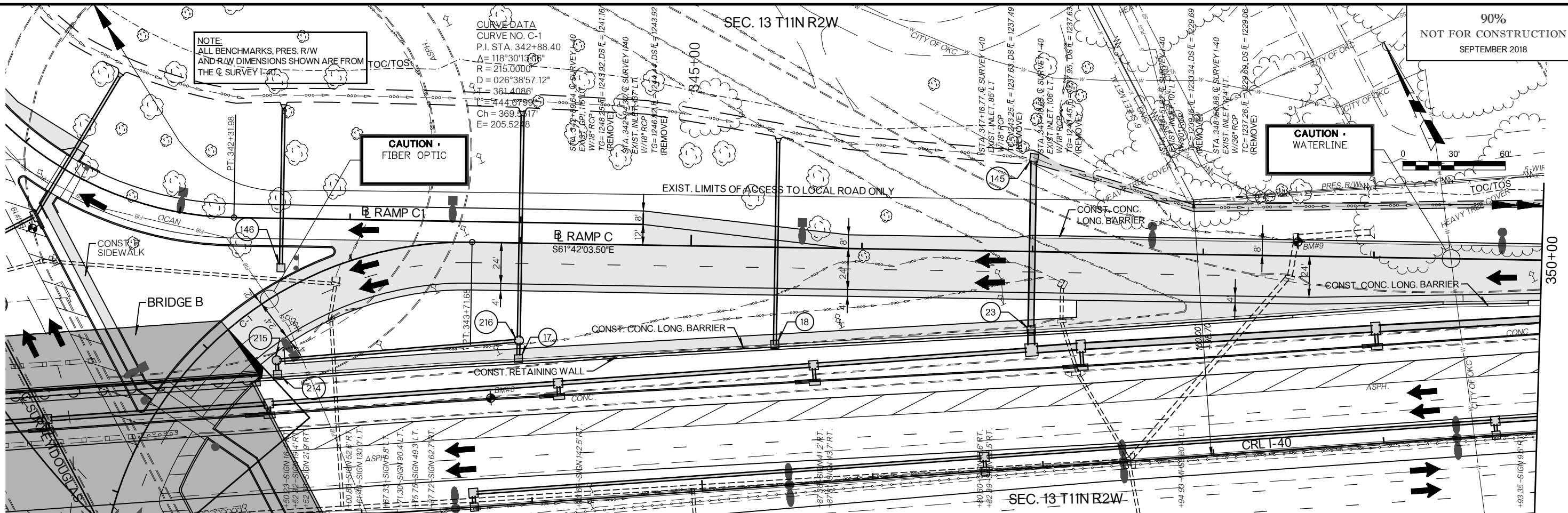
BM#8-CHISELED BOX ON SOUTH CURB OF I-40 WESTBOUND EXIT LANE STA. 343+80, 53' LT. @ SURVEY I-40 ELEV. = 1251.28

RAMP B1

NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.

CURVE DATA
CURVE NO. C-1
P.I. STA. 342+88.40
 $\Delta = 118^{\circ}30'13.06''$
 $R = 215.0000'$
 $D = 026^{\circ}38'57.12''$
 $L = 361.4086'$
Ch = 369.3317'
E = 205.5228'

SEC. 13 T11N R2W



215 STA. 342+28.23, RAMP C
CONST. 4' DIA. MH, 31.95' RT.
STUB 138 LF 18" RCP INTO STR. 216
TR=1269.17, f_L =1263.96, $DS f_L$ =1255.83

BM#8 - CHISELED BOX ON SOUTH CURB
OF I-40 WESTBOUND EXIT LANE
STA. 343+80, 53' LT. Q SURVEY I-40
ELEV. = 1251.28

216 STA. 344+00, RAMP C
CONST. 4' DIA. MH, 57.27' RT.
STUB 130 LF 18" RCP INTO DITCH LT.
TR=1261.43, f_L =1255.83, $DS f_L$ =1246.82

18 STA. 345+50, RAMP C
CONST. LBI TYPE 1 DES. 2, 57.44' RT.
STUB 116 LF 18" RCP INTO DITCH LT.
TG=1256.64, f_L =1251.64, $DS f_L$ =1243.08

BM#9 - CHISELED BOX ON SE CORNER OF DROP
INLET NORTH OF I-40 WESTBOUND LANES
STA. 348+58, 121' LT. Q SURVEY I-40
ELEV. = 1238.40

214 STA. 342+22.65, RAMP C
CONST. LBI, TYPE 1 DES. 2, 38.87 RT.
STUB 4 LF 18" RCP INTO STR. 215
TG=1269.16, f_L =1264.15, $DS f_L$ =1263.96

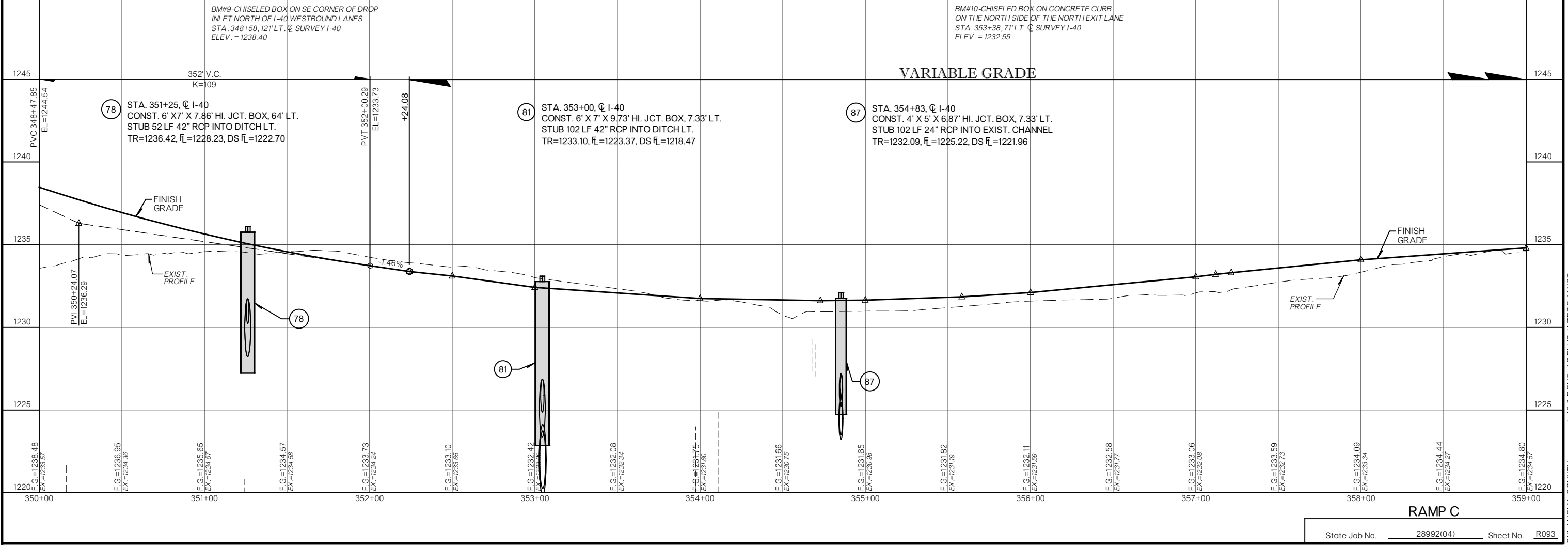
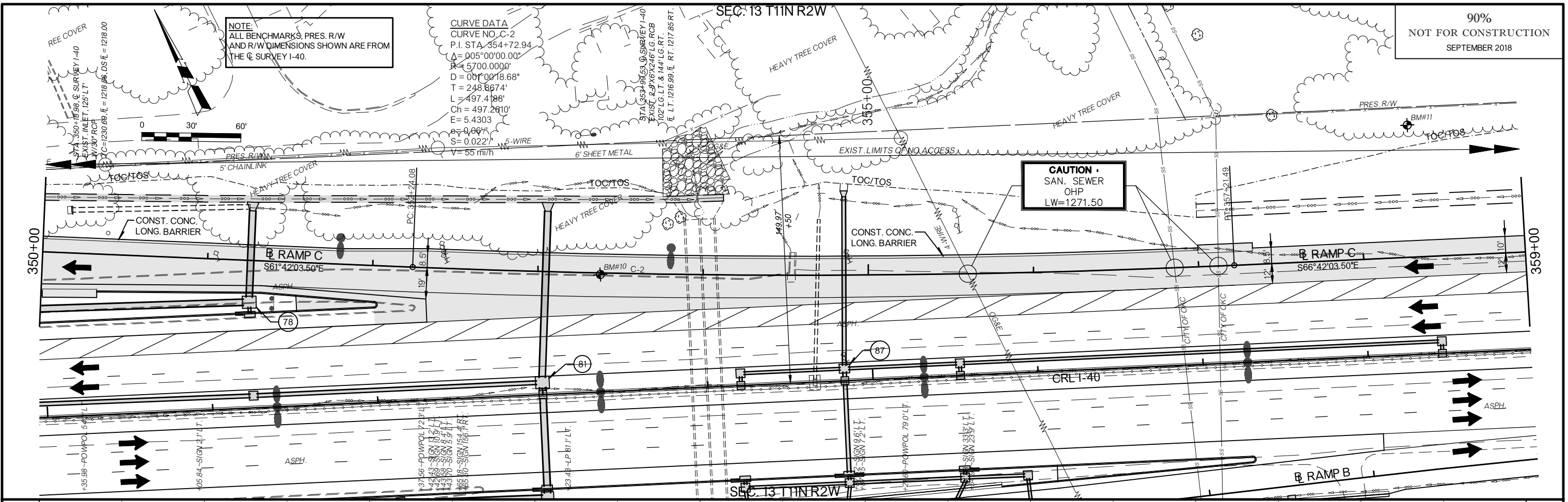
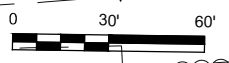
17 STA. 344+00, RAMP C
CONST. LBI, TYPE 1 DES. 2, 68.88' RT.
STUB 8 LF 18" RCP INTO STR. 216
TG=1260.88, f_L =1255.88, $DS f_L$ =1255.83

23 STA. 347+00, RAMP C
CONST. LBI TYPE 1 DES. 2, 47' RT.
STUB 10 LF 42" RCP INTO STR. 67
TG=1250.91, f_L =1230.92, $DS f_L$ =1230.87

145 STA. 347+00, RAMP C
CONST. SMD, TYPE 2, 54.90' LT.
STUB 98 LF OF 36" RCP INTO STR. 23
TG=1239.58, f_L =1233.25, $DS f_L$ =1231.42

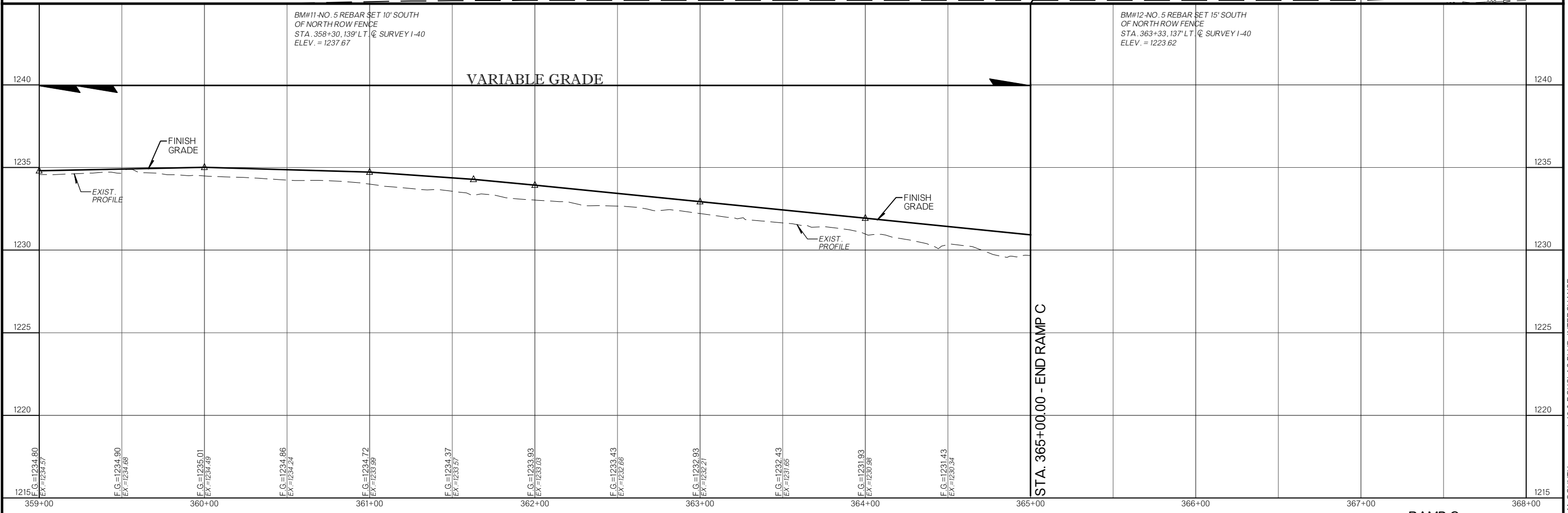
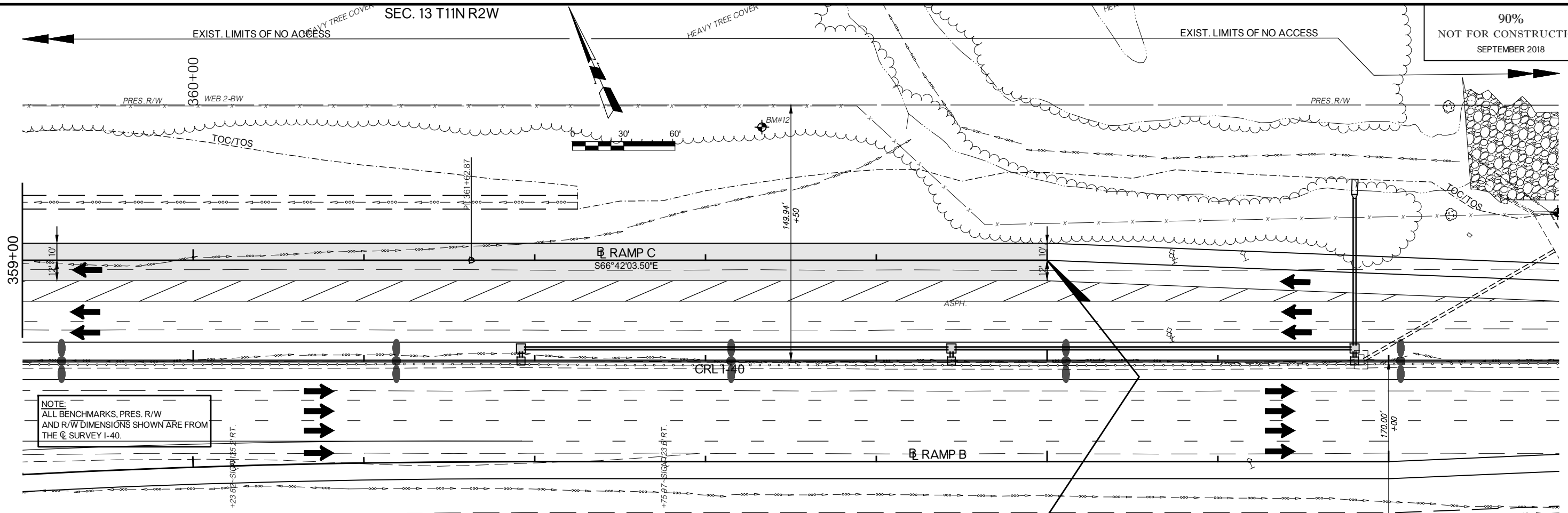
NOTE:
ALL BENCHMARKS, PRES. R/W
AND R/W DIMENSIONS SHOWN ARE FROM
THE C SURVEY I-40.

CURVE DATA
CURVE NO. C-2
P.I. STA. 354+72.94
 $\Delta = 005^{\circ}00'00.00''$
 $R = 5700.0000'$
 $D = 00^{\circ}00'18.68''$
 $T = 248.6674'$
 $L = 497.4188'$
 $Ch = 497.2610'$
 $E = 5.4303$
 $e = 0.067\%$
 $S = 0.022\%$
 $V = 55 \text{ mi/h}$



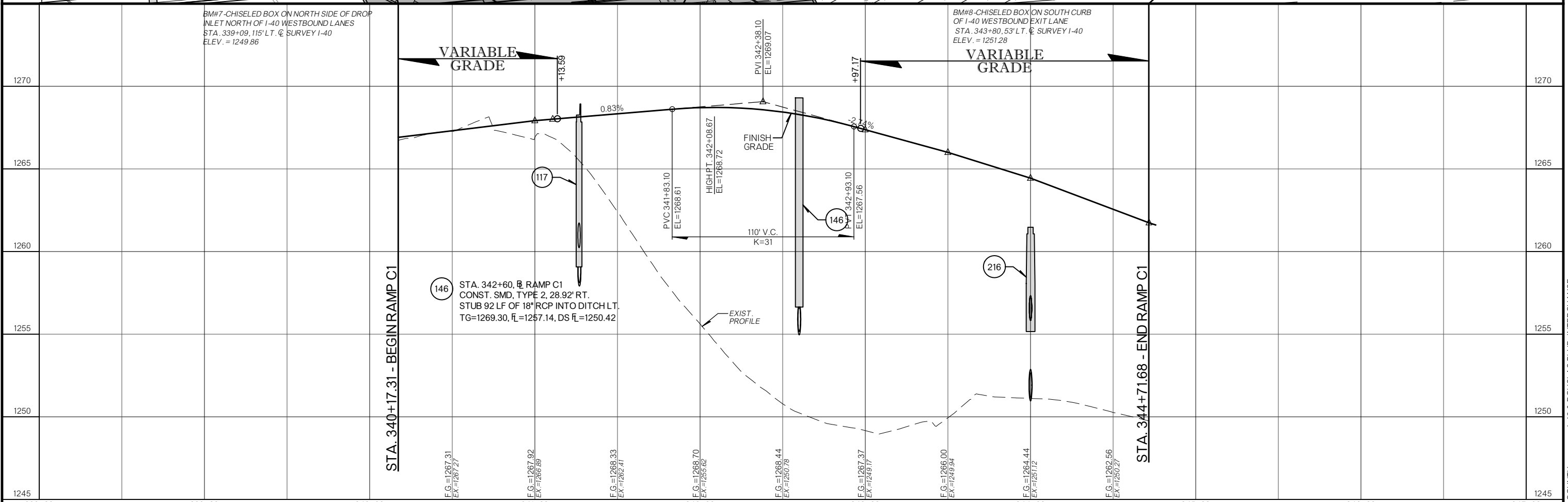
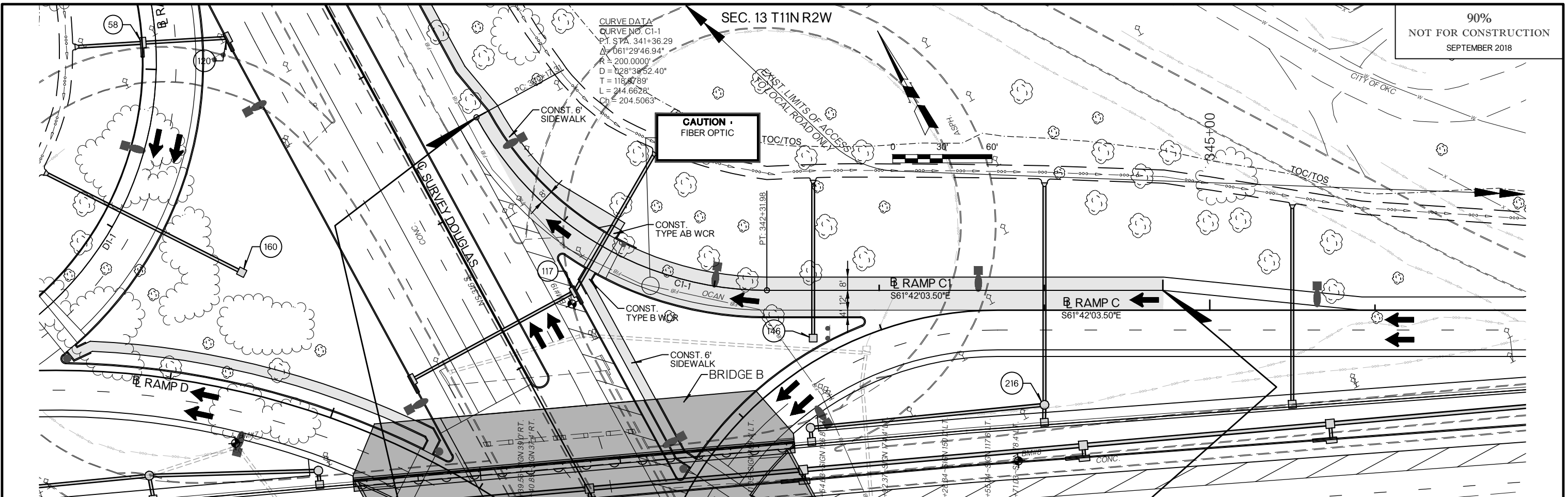
SEC. 13 T11N R2W

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SEPTEMBER 2018



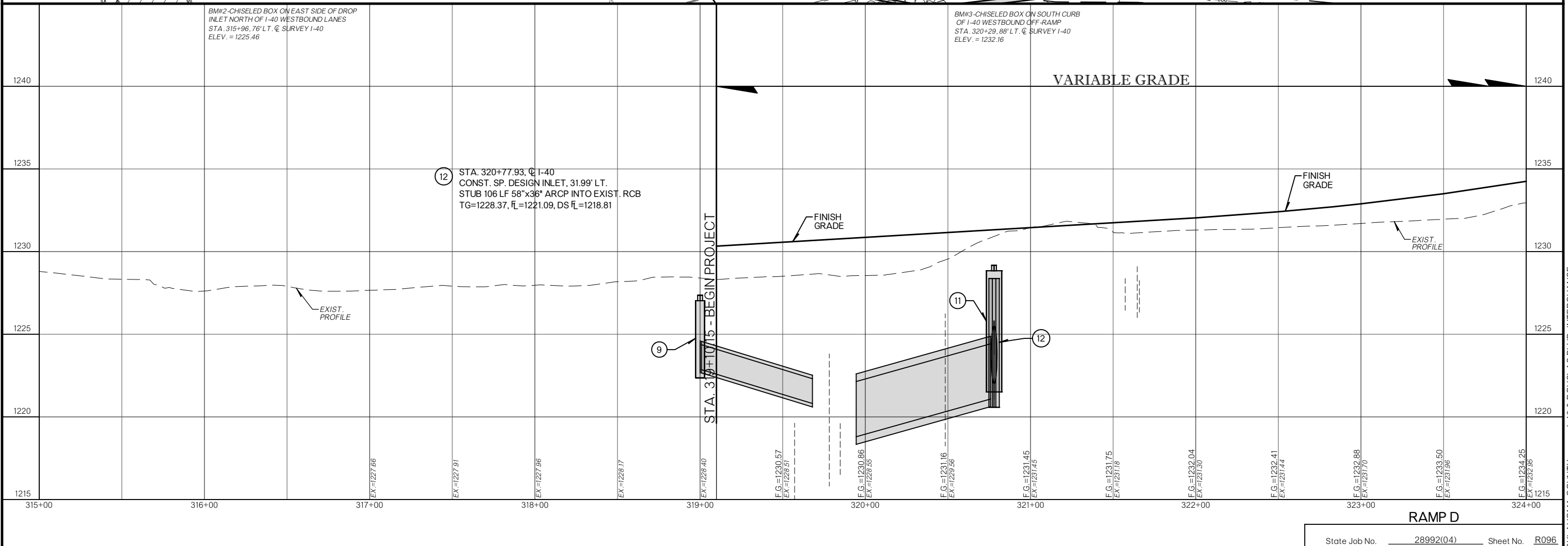
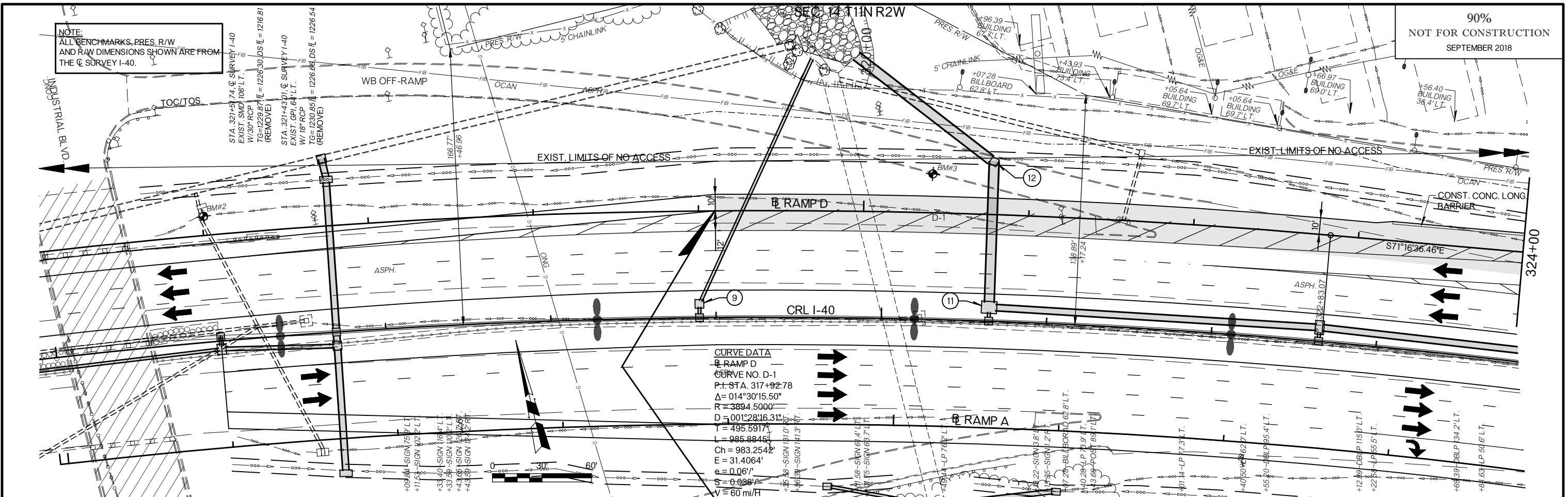
STA. 365+00.00 - END RAMP C

RAMP C

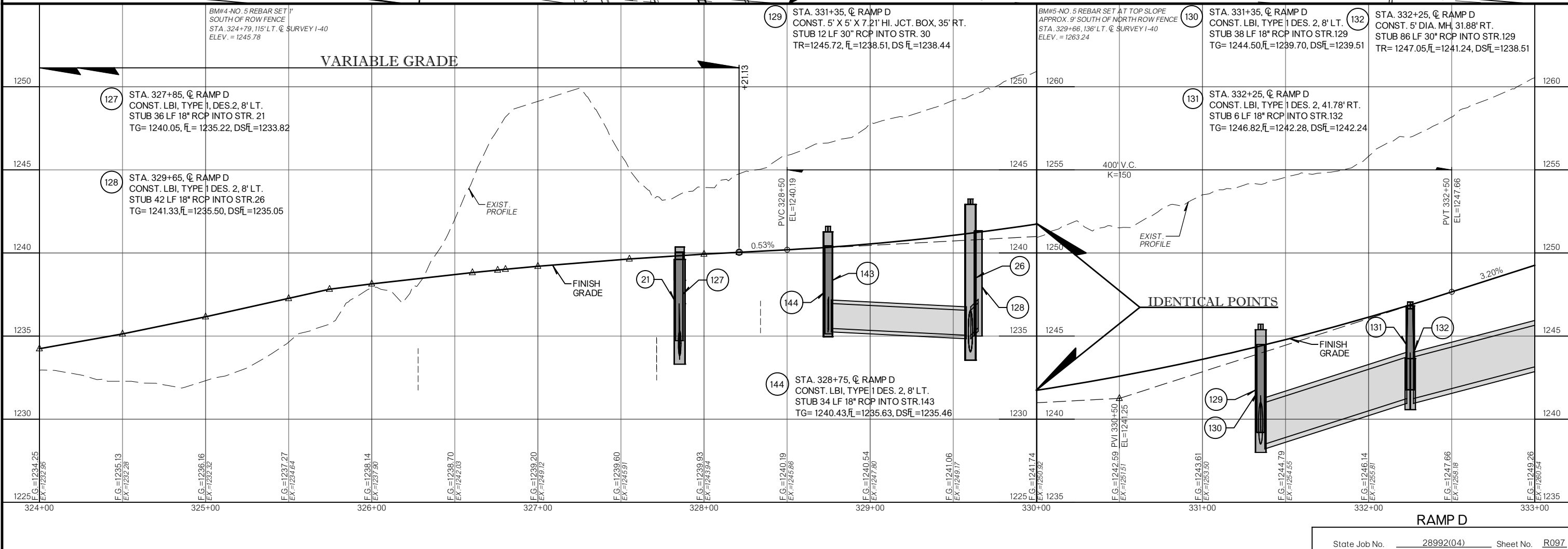
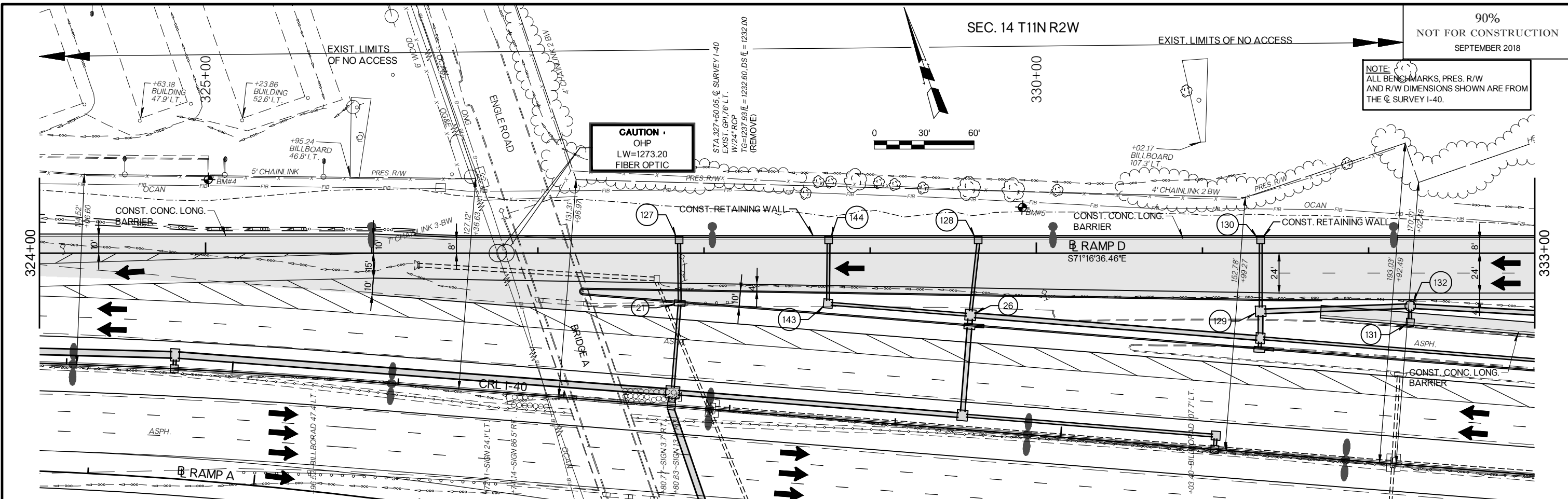


RAMP C1

NOTE:
ALL BENCHMARKS, PRES. R/W
AND RAW DIMENSIONS SHOWN ARE FROM
THE Q SURVEY I-40.



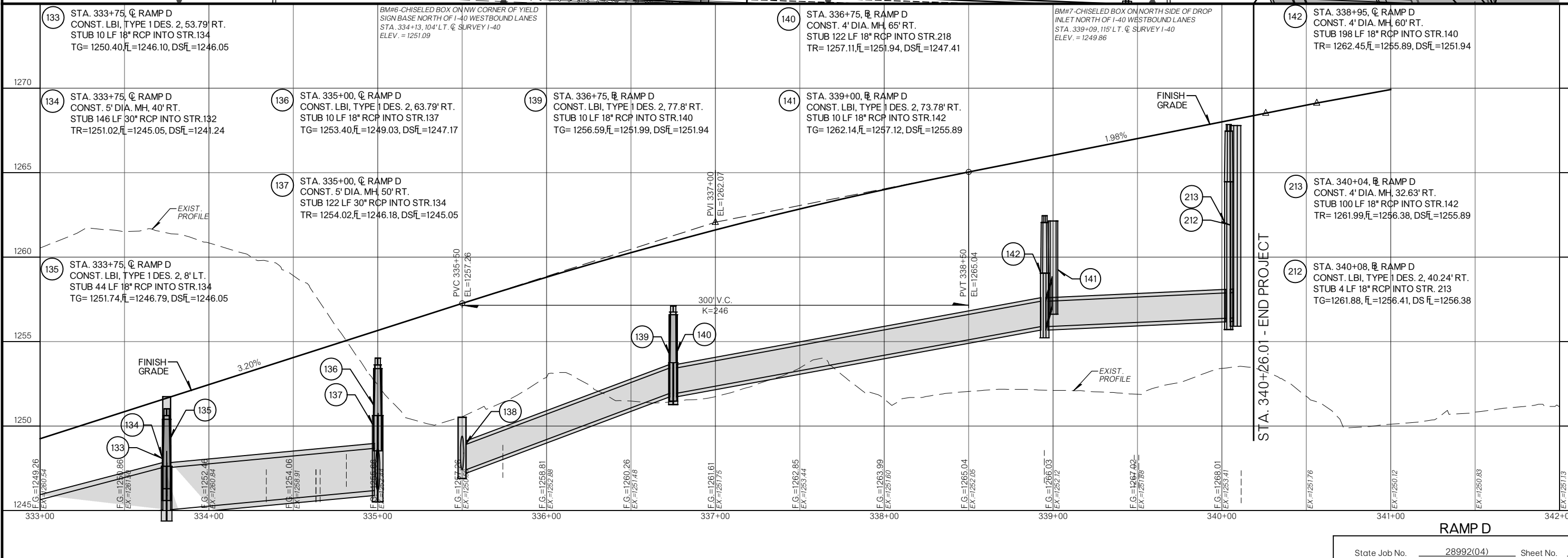
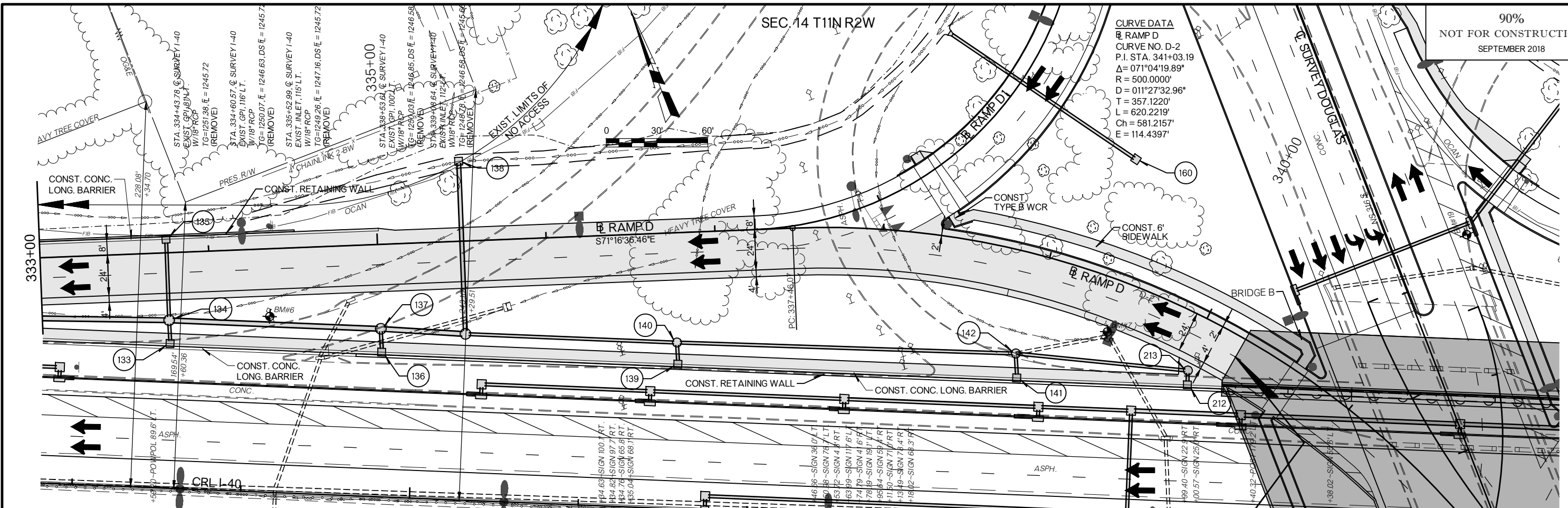
NOTE: ALL BENCHMARKS, PRES. R/W AND R/W DIMENSIONS SHOWN ARE FROM THE C SURVEY I-40.



SEC. 14 T11N R2W

90%
NOT FOR CONSTRUCTION
SEPTEMBER 2018

CURVE DATA
 RAMP D
 CURVE NO. D-2
 P.I. STA. 341+03.19
 Δ = 071°04'19.89"
 R = 500.0000'
 D = 011°27'32.96"
 T = 357.1220'
 L = 620.2219'
 Ch = 581.2157'
 E = 114.4397'



133 STA. 333+75, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 53.79' RT.
 STUB 10 LF 18" RCP INTO STR.134
 TG= 1250.40, FL=1246.10, DSSL=1246.05

BM#6- CHISELED BOX ON NW CORNER OF YIELD
 SIGN BASE NORTH OF I-40 WESTBOUND LANES
 STA. 334+13, 104' LT., Q SURVEY I-40
 ELEV. = 1251.09

140 STA. 336+75, RAMP D
 CONST. 4' DIA. MH, 65' RT.
 STUB 122 LF 18" RCP INTO STR.218
 TR= 1257.11, FL=1251.94, DSSL=1247.41

BM#7- CHISELED BOX ON NORTH SIDE OF DROP
 INLET NORTH OF I-40 WESTBOUND LANES
 STA. 339+09, 115' LT., Q SURVEY I-40
 ELEV. = 1249.86

142 STA. 338+95, RAMP D
 CONST. 4' DIA. MH, 60' RT.
 STUB 198 LF 18" RCP INTO STR.140
 TR= 1262.45, FL=1255.89, DSSL=1251.94

134 STA. 333+75, RAMP D
 CONST. 5' DIA. MH, 40' RT.
 STUB 10 LF 30" RCP INTO STR.132
 TR=1251.02, FL=1245.05, DSSL=1241.24

136 STA. 335+00, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 63.79' RT.
 STUB 10 LF 18" RCP INTO STR.137
 TG= 1253.40, FL=1249.03, DSSL=1247.17

139 STA. 336+75, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 77.8' RT.
 STUB 10 LF 18" RCP INTO STR.140
 TG= 1256.59, FL=1251.99, DSSL=1251.94

141 STA. 339+00, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 73.78' RT.
 STUB 10 LF 18" RCP INTO STR.142
 TG= 1262.14, FL=1257.12, DSSL=1255.89

137 STA. 335+00, RAMP D
 CONST. 5' DIA. MH, 50' RT.
 STUB 122 LF 30" RCP INTO STR.134
 TR= 1254.02, FL=1246.18, DSSL=1245.05

213 STA. 340+04, RAMP D
 CONST. 4' DIA. MH, 32.63' RT.
 STUB 100 LF 18" RCP INTO STR.142
 TR= 1261.99, FL=1256.38, DSSL=1255.89

135 STA. 333+75, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 8' LT.
 STUB 44 LF 18" RCP INTO STR.134
 TG= 1251.74, FL=1246.79, DSSL=1246.05

212 STA. 340+08, RAMP D
 CONST. LBI, TYPE 1 DES. 2, 40.24' RT.
 STUB 4 LF 18" RCP INTO STR. 213
 TG=1261.88, FL=1256.41, DSSL=1256.38

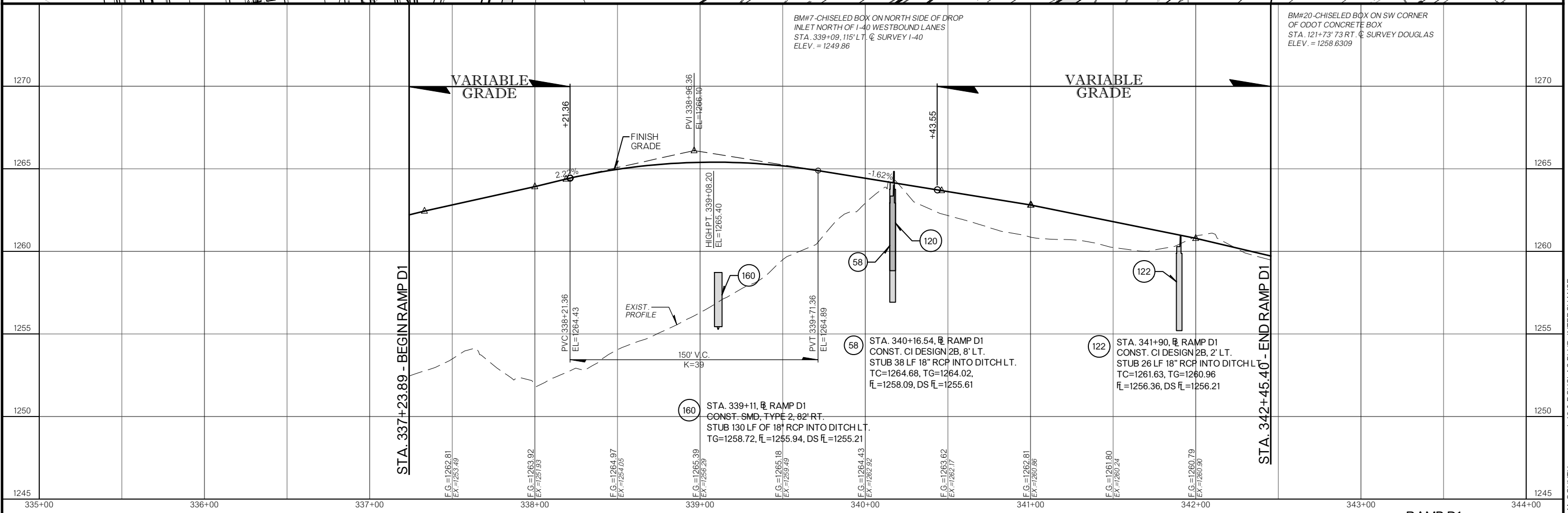
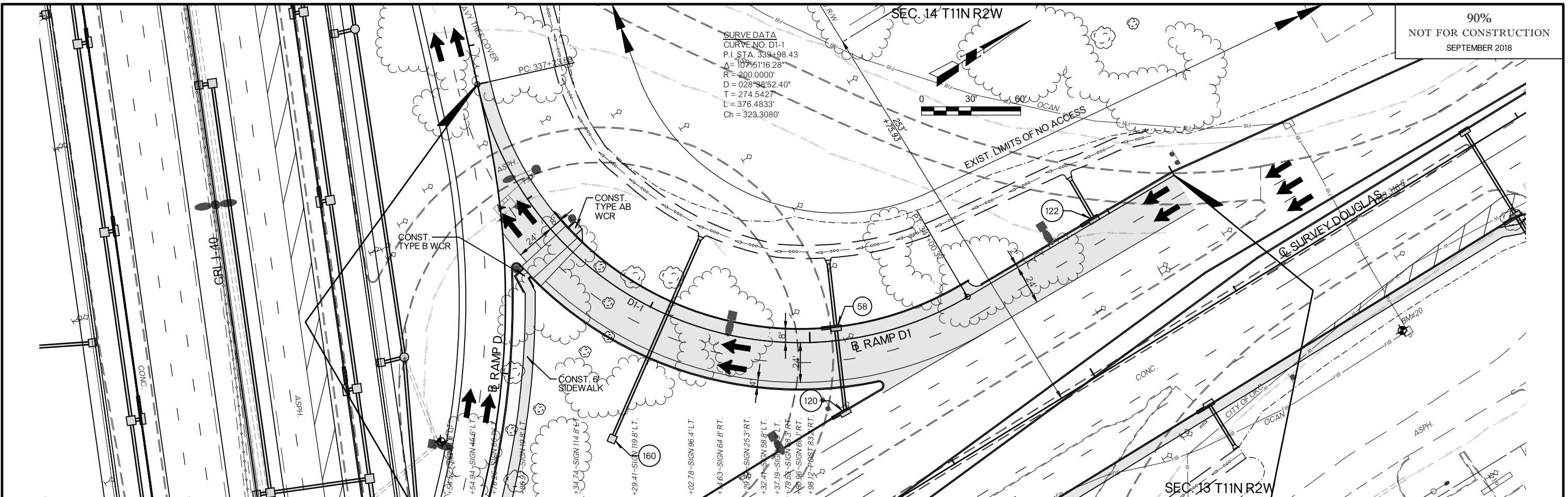
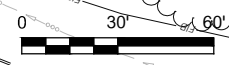
RAMP D

OKLAHOMA COUNTY I-40 & DOUGLAS BLVD. INTERCHANGE

SEC. 14 T11N R2W

SEC. 13 T11N R2W

SURVEY DATA
CURVE NO. D1-1
P.I. STA. 339+98.43
 $\Delta = 107^\circ 51' 16.28''$
 $R = 200.0000'$
 $D = 028^\circ 58' 52.40''$
 $T = 274.5427'$
 $L = 376.4833'$
 $Ch = 323.3080'$



BM#7 - CHISELED BOX ON NORTH SIDE OF DROP INLET NORTH OF I-40 WESTBOUND LANES
STA. 339+09.115' LT. \odot SURVEY I-40
ELEV. = 1249.86

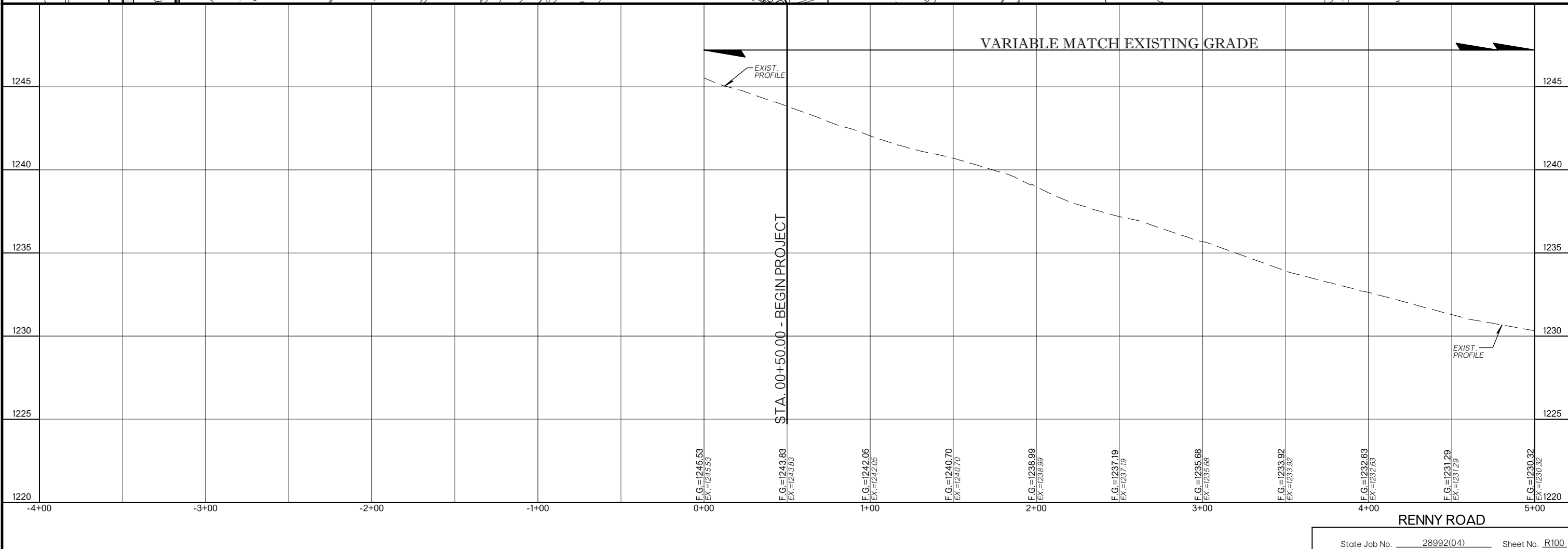
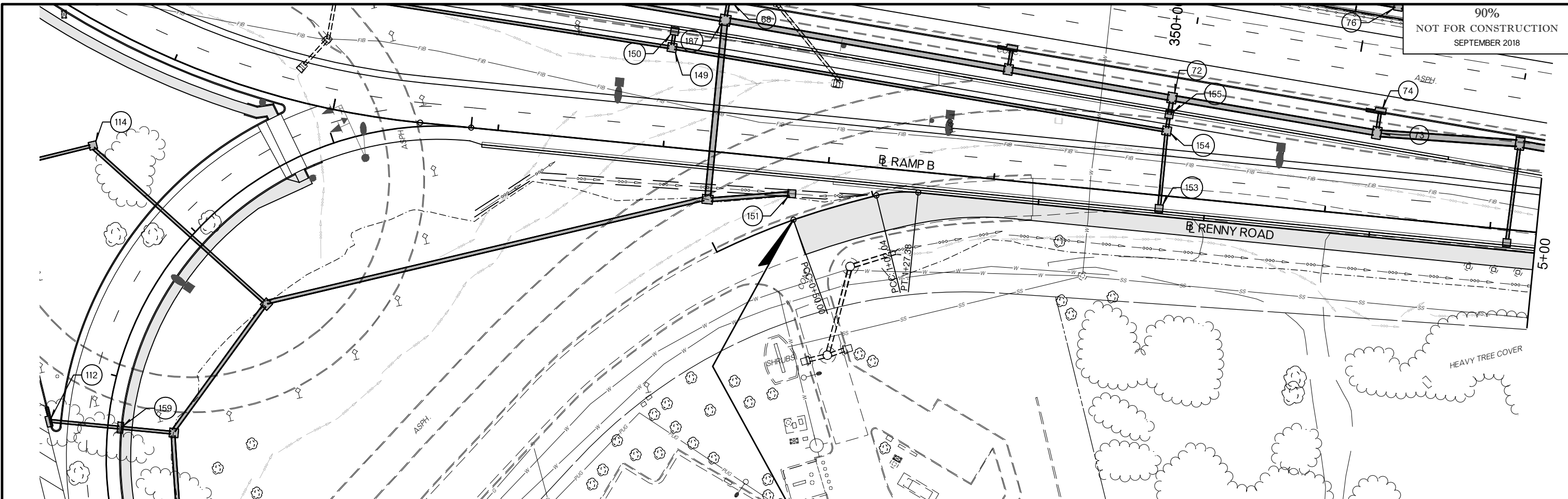
BM#20 - CHISELED BOX ON SW CORNER OF ODOT CONCRETE BOX
STA. 121+73' 73 RT. \odot SURVEY DOUGLAS
ELEV. = 1258.6309

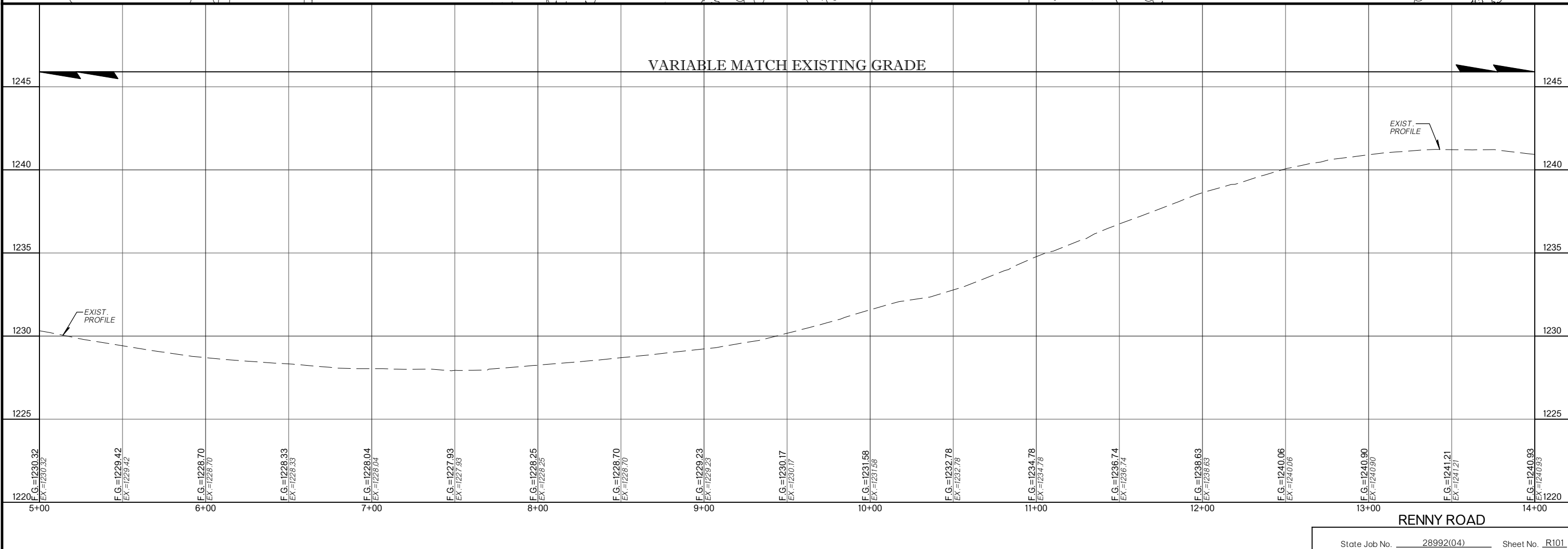
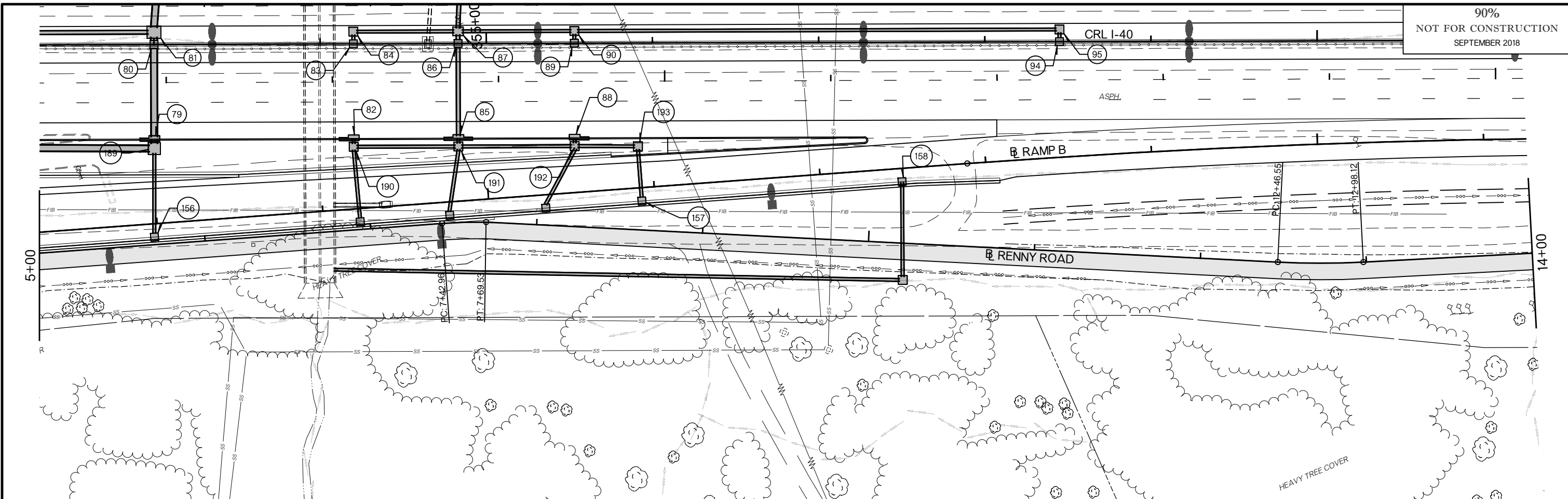
58 STA. 340+16.54, \odot RAMP D1
CONST. CI DESIGN 2B, 8' LT.
STUB 38 LF 18" RCP INTO DITCH LT.
TC=1264.68, TG=1264.02,
f_L=1258.09, DS f_L=1255.61

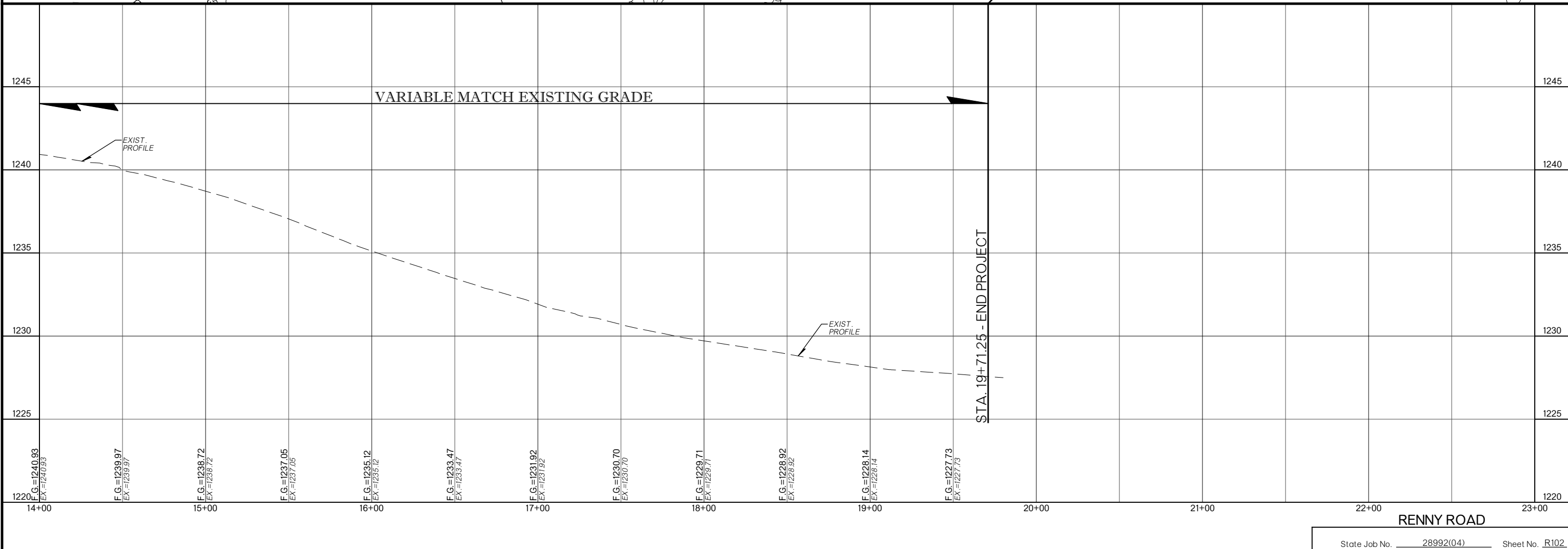
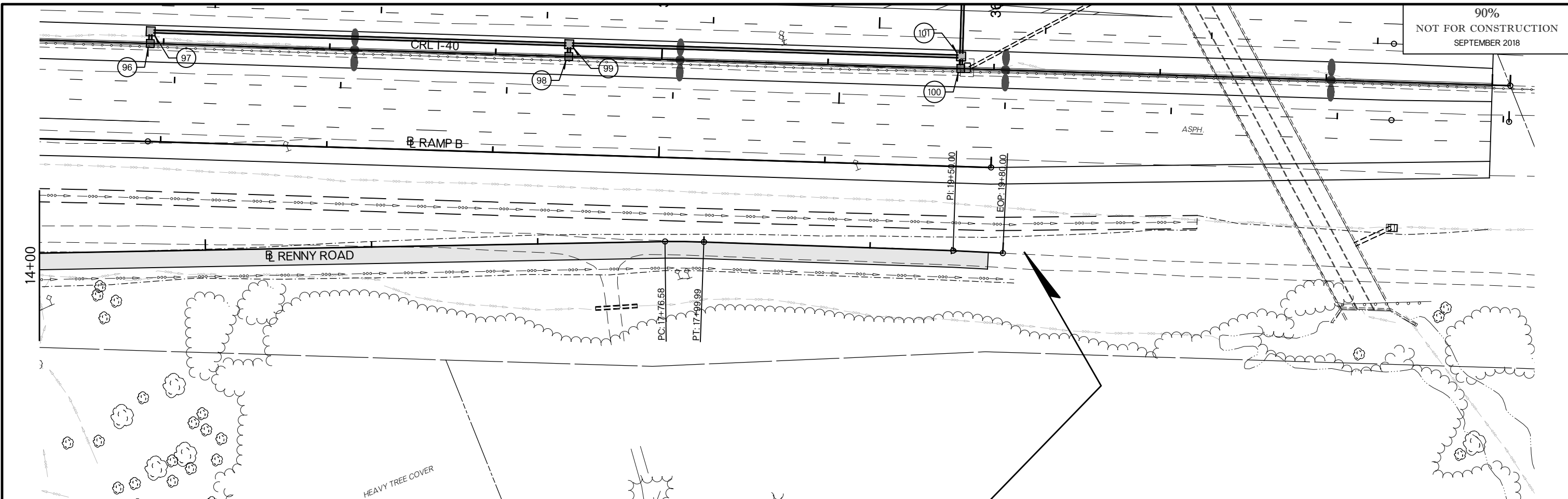
122 STA. 341+90.00, \odot RAMP D1
CONST. CI DESIGN 2B, 2' LT.
STUB 26 LF 18" RCP INTO DITCH LT.
TC=1261.63, TG=1260.96
f_L=1256.36, DS f_L=1256.21

160 STA. 339+11.00, \odot RAMP D1
CONST. SMD, TYPE 2, 82' RT.
STUB 130 LF OF 18" RCP INTO DITCH LT.
TG=1258.72, f_L=1255.94, DS f_L=1255.21

RAMP D1









3020 N.W. 149th Street
 Oklahoma City, Oklahoma 73134
 Ph. (405) 752-1122
 Fax (405) 752-8855

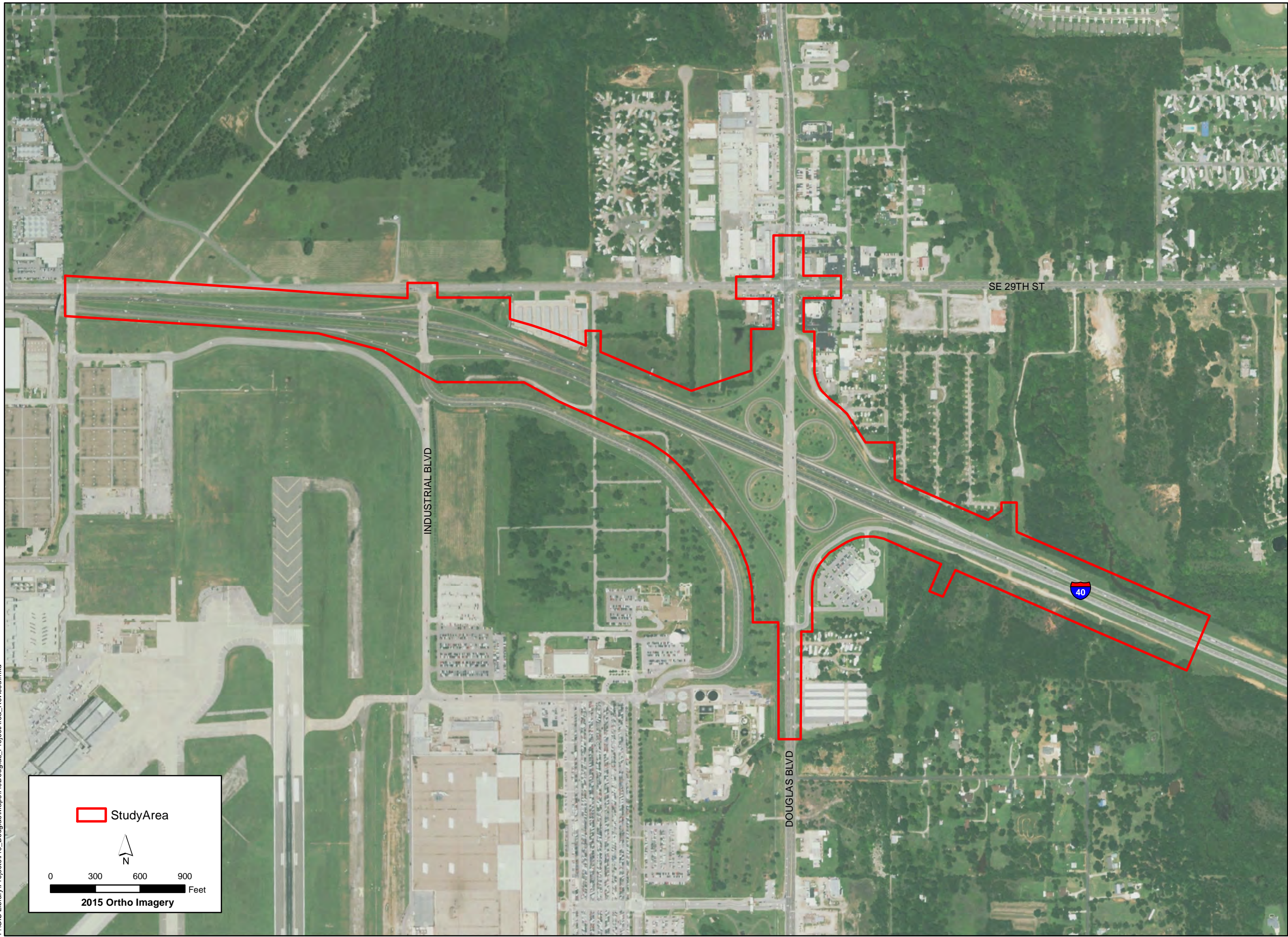


FIGURE TITLE

STUDY AREA MAP FOR JP 28992 (04)

DOCUMENT TITLE

BIOLOGICAL ASSESSMENT - I-40 & DOUGLAS BOULEVARD INTERCHANGE

CLIENT

OKLAHOMA DEPARTMENT OF TRANSPORTATION

LOCATION

OKLAHOMA COUNTY, OKLAHOMA

DATE	1/5/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

PUBLIC INVOLVEMENT

PUBLIC MEETING SUMMARY AND RESPONSES TO COMMENTS

**I-40/Douglas Boulevard Bridge Replacement
and Interchange Reconstruction**

**Oklahoma County, Oklahoma
JP 28992(04)**

Prepared for:



**Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, OK 73105**

Prepared by:

**Triad Design Group
Oklahoma Certificate of Authority No. 1759
3020 Northwest 149th Street
Oklahoma City, OK 73134
405-752-1122**

March 2017



PUBLIC MEETING SUMMARY AND RESPONSES TO COMMENTS

**I-40/Douglas Boulevard Bridge Replacement
and Interchange Reconstruction**

**Oklahoma County, Oklahoma
JP 28992(04)**

Prepared for:



**Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, OK 73105**

Prepared by:

**Triad Design Group
Oklahoma Certificate of Authority No. 1759
3020 Northwest 149th Street
Oklahoma City, OK 73134
405-752-1122**

March 2017



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EXECUTIVE SUMMARY

This document summarizes the public meeting conducted for the I-40/Douglas Boulevard Bridge replacement and interchange reconstruction project in Oklahoma County, Oklahoma. The purpose of the public meeting was to present information about the proposed alternatives to the public and obtain input. The public meeting was held on January 17, 2017 at 6:00 p.m. in the Bill Atkinson Center Raider Room, Rose State College. Fifty-four attendees signed in for the meeting. The meeting included a presentation on the project from the Oklahoma Department of Transportation's (ODOT) engineering consultant, Triad Design Group (Triad). Representatives from ODOT and Triad were available for discussion before and after the presentation. The comment period was open until February 14, 2017 with a total of 22 written comments received, including 10 from agencies and 13 from members of the public (1 of the public comments was received by telephone). Agency comments and ODOT responses are summarized in Table ES.1.

TABLE ES.1: AGENCY COMMENT AND RESPONSE SUMMARY

Agency	Response
Bureau of Indian Affairs	No tribal or individual Indian trust lands; no concerns
National Park Service	No comments.
Natural Resources Conservation Service	No considerations or permits needed from the agency.
Oklahoma Aeronautics Commission	Recommends determining if a Form 7460-1 should be submitted.
Oklahoma Conservation Commission	<ul style="list-style-type: none"> • No comments specific to the alternatives. • Concerns: <ul style="list-style-type: none"> ○ Disturbance of riparian areas ○ Siltation problems ○ Mechanical disturbance in the stream ○ Reduction of cross-sectional area needed for adequate drainage • Recommendations: <ul style="list-style-type: none"> ○ Reduce disturbance ○ Develop sufficient erosion control plans to minimize sedimentation ○ Minimize changes in stream configuration, or mitigate through conservation easement • Suggests sufficient cross-sectional drainage area through any modified bridge crossings. • Requests streams remain free flowing after construction.
Oklahoma Corporation Commission	No records of oil and gas wells located within Project Area.
Oklahoma Department of Commerce	<ul style="list-style-type: none"> • Supports alternative that supports the most traffic volume, including semi-trucks and trailers, due to TAFB projected growth. • Consider impact of construction of the Eastern Oklahoma County turnpike. • Before construction begins at I-40/Douglas, review interchanges at I-240/Douglas and I-240/Air Depot for maintenance needed to accommodate diverted commercial traffic.
Oklahoma Department of Environmental Quality	<ul style="list-style-type: none"> • Storm Water Permit required for construction disturbing >1 acre. • Recommends contacting TAFB Environmental Restoration Branch re: monitoring wells in the Project Area, and potential for interaction with the perched aquifer in the Project Area.
Oklahoma Tourism and Recreation Department	No adverse impacts on federally-funded parks, recreation areas, or state parks.
Oklahoma Water Resources Board	Recommends contacting the local floodplain administrator (i.e., Oklahoma County) for possible permit requirements. Also notes that if development falls on state owned or operated property, a floodplain development permit is required from OWRB.

Most of the public comments expressed support for one (or in some cases two) of the three alternatives presented at the public meeting. In addition to expressing support for an alternative, several other miscellaneous questions or comments were expressed. Table ES.2 summarizes the comments received. Note that the total number of comments is greater than the number of comments received, as several people made multiple comments.

TABLE ES.2: PUBLIC COMMENT SUMMARY

Comment	# of Comments
Expressed support for Alternative 1	8
Expressed support for Alternative 2	4
Expressed support for Alternative 3	1
Against Alternative 2, with questions about the Future Flyover	2
Against Alternative 3 - various reasons (i.e., dislike weaving and ramp loops, not pedestrian friendly)	2
Requested detail of SPUI phased traffic movements	1
Suggested truck traffic be considered in design process	1
Suggested placing the rest of the road in front of Tinker underground	1
Supports pedestrian accommodations	2
Requested more visible lane striping	1
Requested better media coverage of public meetings	1
Expressed concerns regarding St. Anthony Healthplex access	1
Expressed concerns regarding traffic operations at S.E. 29th Street/Douglas Boulevard	2

1 PROJECT INTRODUCTION

This document summarizes the public meeting conducted for the I-40/Douglas Boulevard Bridge replacement and interchange reconstruction project in Oklahoma County, JP 28992(04). The purpose of the public meeting was to present information about the proposed alternatives to the public and to obtain public input.

2 AGENCY SOLICITATION

Initial agency solicitation letters were sent to federal and state resource agencies. These letters presented a short project description and the purpose of the proposed project, and included enclosures consisting of a project location map and graphics of the three alternatives. The letter, dated December 22, 2016, also invited recipients to the public meeting and requested input be provided by February 14, 2017. Copies of the letter and mailing list are included in Appendix A.

3 PUBLIC MEETING

3.1 MEETING NOTIFICATION

Notice of the public meeting was sent by letter dated December 22, 2016 to elected officials (federal and state), the Governor's office, Oklahoma County Commissioners, the Cities of Midwest City and Oklahoma City, local school districts, emergency service providers, and medical facilities in the study area. The officials letter provided a brief description of the purpose and need for the project, and an invitation to the public meeting. The officials letter was accompanied by a project location map. Copies of the letter and list are included in Appendix B.

Notice of the public meeting was also sent by letter dated December 22, 2016 to all utility companies and to all property owners in the study area, based upon Oklahoma County Assessor information. Copies of this letter and mailing list are included in Appendix C.

3.2 MEETING INFORMATION AND FORMAT

The public meeting was held on January 17, 2017 at 6:00 p.m. in the Bill Atkinson Center Raider Room, Rose State College. Fifty-four people signed in for the meeting, including representatives from ODOT, Triad, City of Midwest City, City of Oklahoma City, Tinker Air Force Base, Rose State College, St. Anthony Healthplex, several business owners, and members of the public. Copies of the sign-in-sheets are included in Appendix D.

Mr. Brian Taylor, ODOT Division 4 Engineer, opened the meeting with some general remarks. Triad then gave a presentation about the project, providing detailed information on the three (3) alternatives under consideration:

- Alternative 1 – Single Point Urban Interchange (SPUI)
- Alternative 2 – Tight Urban Diamond Interchange (TUDI) with Future Flyover Ramp
- Alternative 3 – Cloverleaf Interchange

The presentation was followed by an open question and answer period, after which ODOT and Triad staff were available for one-on-one and small group discussions. Display boards showing the three alternatives under consideration and environmental constraints were available for public viewing.

A handout with project information and a map of the proposed alternative was provided to attendees. A copy of the presentation is included in Appendix E. Copies of the handouts and displays are included in Appendix F.

The presentation covered:

- Purpose of the Meeting
- Existing Facility
- Collision History
- Purpose and Need for the Project
- Proposed Project Description
- Description of Three (3) Alternatives Considered
- Constraints in the Area
- Comparison Matrix of the Alternatives
- Request for Public Input
- Next Steps

3.3 SUMMARY OF COMMENTS

Nine (9) written comments from agencies, and 1 telephone and 12 written comments from the public were received both before and after the public meeting.

3.3.1 AGENCY COMMENTS

The nine written agency comments are summarized in the following text, and copies of the agency response letters are included in Appendix G.

- The National Park Service had no comments on the project.
- The Natural Resources Conservation Services stated no considerations or permits are needed from the agency.
- The Oklahoma Aeronautics Commission recommends determining if a Form 7450-1 should be submitted, due to the proximity of Tinker Air Force Base.
- The Oklahoma Conservation Commission (OCC) listed several general concerns including disturbance and siltation of streams and riparian areas and changes to stream channels that may constrict flows and result in flooding.
- The Oklahoma Corporation Commission had no records of oil and gas wells located within the Project Area.

- The Oklahoma Department of Commerce supports the alternative that supports the most traffic volume, including semi-trucks and trailers, due to Tinker Air Force Base projected growth. The agency also suggested that ODOT consider the impact of construction of the Eastern Oklahoma County turnpike, and recommended that the interchanges at I-240/Douglas and I-240/Air Depot be evaluated for any maintenance which may be needed to accommodate commercial traffic which may be diverted during construction at I-40/Douglas.
- The Oklahoma Department of Environmental Quality (ODEQ) noted that construction projects disturbing greater than 1 acre require storm water permitting. The ODEQ also attached a list of recommendations for general construction/improvement projects which addressed items such as plumbing codes, lead-based paint, asbestos, fugitive dust, solid waste, and OPDES permitting. Lastly, the ODEQ recommended contacting Tinker Air Force Base Environmental Restoration Branch regarding monitoring wells in the Project Area and the potential for interaction with the perched aquifer in the Project Area.
- The Oklahoma Tourism and Recreation Department responded that no adverse impacts were anticipated on federally-funded parks, recreation areas, or state parks.
- The Oklahoma Water Resources Board recommended contacting the Oklahoma County floodplain administrator for possible permit requirements, and noted that if development falls on state owned or operated property, a floodplain development permit is required from OWRB.

3.3.2 PUBLIC COMMENTS

Most of the public comments expressed support for one (or in some cases two) of the three alternatives presented at the public meeting. In addition to expressing support for an alternative, several other miscellaneous questions or comments were expressed. Table 3.1 summarizes the comments received. Note that the total number of comments is greater than the number of comments received, as several people made multiple comments. Copies of the public comments received are included in Appendix H.

TABLE 3.1: PUBLIC COMMENT SUMMARY

Comment	# of Comments
Expressed support for Alternative 1	8
Expressed support for Alternative 2	4
Expressed support for Alternative 3	1
Against Alternative 2, with questions about the Future Flyover	2
Against Alternative 3 - various reasons (i.e., dislike weaving and ramp loops, not pedestrian friendly)	2
Requested detail of SPUI phased traffic movements	1
Suggested truck traffic be considered in design process	1
Suggested placing the rest of the road in front of Tinker underground	1
Supports pedestrian accommodations	2
Requested more visible lane striping	1
Requested better media coverage of public meetings	1
Expressed concerns regarding St. Anthony Healthplex access	1
Expressed concerns regarding traffic operations at S.E. 29th Street/Douglas Boulevard	2

3.4 RESPONSE TO PUBLIC COMMENTS

ODOT’s responses to the general comment topics are summarized in the following sections of text.

- **Support for Alternative 1, Alternative 2, and/or Alternative 3**

ODOT thanks you for your input.

- **Purpose of Alternative 2 Future Flyover**

Alternative 2 includes construction of a northbound Douglas to westbound I-40 flyover ramp in the future because traffic analysis forecasts the traffic volumes associated with that movement to increase in the future, primarily due to an increase in Tinker Air Force Base traffic.

- **Against Alternative 3**

Traffic analysis predicts that traffic operations for Alternative 3 – Cloverleaf will degrade to an unacceptable level in the future. Therefore, ODOT considered two additional interchange design solutions, i.e., Alternative 1 – SPUI and Alternative 2 – TUDI with Future Flyover.

- **Clarification of SPUI Phased Traffic Movements**

The SPUI design will include signalization that controls traffic moving through both the northwest quadrant (i.e., northbound and southbound Douglas traffic destined to WB I-40) and the southeast quadrant (i.e., northbound and southbound Douglas traffic destined to EB I-40). This signalization will ensure that both left-turning and right-turning Douglas traffic destined to I-40 within the same quadrant will move in separate, sequential phases of the traffic light, thus avoiding the need for either traffic movement to yield to the other.

- **Consideration of Truck Traffic in Design**

ODOT agrees that truck traffic on this bridge and through this interchange must be considered in the design process. In fact, truck traffic is one of the chief reasons this project (which includes additional lanes on I-40) is needed.

- **Suggestions Relating to Tinker Air Force Base**

ODOT recognizes that Tinker Air Force Base (TAFB) is a vital stakeholder in any proposed improvement to this area. Because the TAFB mission is of the utmost importance, ODOT has coordinated extensively with TAFB staff and considered their input in the design process.

- **Pedestrian Accommodations**

ODOT considers all modes of transportation (i.e., including pedestrian) in the planning process.

- **More Visible Lane Striping**

ODOT is continuously evaluating more durable paints, and anticipates that the visibility of lane striping will continue to improve in the future.

- **Better Media Coverage of Meetings**

ODOT provides notice of all public meetings to the local news outlets, who then determine if and/or how to disseminate the notice.

- **St. Anthony Healthplex Access**

St. Anthony Healthplex representatives expressed concerns that access to the full-service emergency room be maintained throughout construction, and pointed out a traffic conflict that exists for eastbound I-40 traffic exiting at Douglas Boulevard, destined for the Healthplex. ODOT has incorporated these concerns into the design development and selection process.

- **S.E. 29TH Street/Douglas Boulevard Traffic Operations**

ODOT's traffic analysis has shown this area is currently in need of improvement and that traffic conditions will worsen in the future unless improvements are made. ODOT will work with the Cities of Midwest City and Oklahoma City to identify and implement improvements to this intersection.

**APPENDIX A
AGENCY SOLICITATION LETTER
AND MAILING LIST**





December 23, 2016

Mr. Tim Vermillion
Oklahoma Department of Transportation
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

Re: Public Meeting Letters, I-40 and Douglas, JP 28992(04)

Dear Tim:

This letter is to document that Triad Design Group mailed 20 solicitation letters, 50 officials letters, and 26 landowner/utility letters for the above-referenced project on December 23, 2016. All letters were sent via USPS.

I personally checked the contents of all the envelopes, and checked that the letter inside address matched the envelope address. If you have any comments or questions, please feel free to call me at 405-919-0481.

Sincerely,

A handwritten signature in cursive script that reads 'Diane Abernathy'.

Diane Abernathy, P. E.
Senior Project Manager

Triad Project E211-06

December 22, 2016

Inside Address

RE: Solicitation for I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(004)

Dear _____:

The Oklahoma Department of Transportation (ODOT), in cooperation with Federal Highway Agency (FHWA), is soliciting comments on possible improvements to the I-40 and Douglas Boulevard bridge and interchange in Oklahoma County, Oklahoma.

The Douglas Boulevard bridge over I-40 is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft wide sidewalks on each side of the bridge. The existing Douglas Boulevard bridge is an 80-ft wide concrete continuous slab bridge, with a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16-ft-9-in (eastbound) and 16-ft-4-in (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 47,980 vpd by the year 2045.

I-40 underneath Douglas Blvd is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The current AADT on I-40 is 54,574 vehicles per day (vpd), and is projected to increase to 84,580 vpd by the year 2045. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40. The number of collisions at this location is higher than the state average at similar locations.

The existing Engle Road bridge over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists and the property is now owned by Tinker Air Force Base. Therefore, Engle Road bridge is closed to traffic and not in use.

The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes. Three (3) interchange alternatives have been identified for consideration:

- **Alternative 1 - Single Point Urban Interchange (SPUI).** A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- **Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover.** A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."



OKLAHOMA DEPARTMENT OF TRANSPORTATION

Environmental Programs Division

200 N.E. 21st Street
Oklahoma City, OK 73105-3204
www.odot.org

- Alternative 3 - Cloverleaf Interchange. The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40.

Please see the enclosed figures which depict the areas associated with the improvements to the subject bridge and interchange. Regardless of the interchange alternative selected, the Engle Road bridge over I-40, which is no longer in service, will be removed as a part of this project.

A Public Meeting is being held to present the project information on **January 17, 2017, 6:00 p.m.**, in the Raider Room of the Bill Atkinson Student Center at Rose State College, 6420 SE 15th Street, Midwest City, Oklahoma. The purpose of the Public Meeting is to solicit public and agency input on the proposed improvements for further consideration. All 3 alternatives will be presented to the public and the Preferred Alternative will be selected, taking into consideration public and agency input in addition to the cost, right-of-way, utilities and environmental impacts.

This project is in the early developmental stages and any comments relative to the social, economic, or environmental effects of this proposal will be appreciated. To allow adequate time for evaluation of your comments, we would appreciate receiving a response by February 14, 2017. Your written comments should be directed to the Environmental Programs Division Engineer, Oklahoma Department of Transportation, 200 N. E. 21st Street, Oklahoma City, Oklahoma 73105 or odot-environment@odot.org.

We sincerely appreciate your cooperation in this matter. ODOT has contracted with Triad Design Group on this project. Should you have any questions regarding the project, please contact our Consultant, Diane Abernathy, Triad Design Group, at 405-919-0481, dabernathy@triaddesigngroup.com or Tim Vermillion, ODOT Environmental Project Manager at 405-521-2676, tvermillion@odot.org.

Sincerely,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS:TV:Triad:DA

Enclosures: Location Map and 3 Alternatives Maps with Constraints

The Oklahoma Department of Transportation (ODOT) ensures that no person or groups of persons shall, on the grounds of race, color, sex, religion, national origin, age, disability, retaliation or genetic information, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by ODOT, its recipients, sub-recipients, and contractors. If any interested individual has a disability that may require accommodation to participate in this meeting, please contact ODOT ADA Coordinator at (405) 521-4140. Upon advance notification of the need for accommodation, reasonable arrangements will be made to provide accessibility to the meeting.

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."

AN EQUAL OPPORTUNITY EMPLOYER

Mr. Gary McDonald
Acting Assistant Field Manager,
Multi Resources Oklahoma Field Office
Bureau of Land Management
201 Stephenson Parkway, Suite 1200
Norman, Oklahoma 73019

Mr. Basharat Siddiqi
Division Administrator
Federal Highway Administration
5801 N. Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73118

Ms. Marjorie McColl Petty
Regional Director
Health & Human Services Region 6
1301 Young Street, Ste.124
Dallas, Texas 75202

Mr. Andrew Commer
Regulatory Branch Chief
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Colonel Richard Pratt
District Engineer
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Mr. Steve Nolen
Planning & Environmental (PER) Division
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Mr. Greg Estep
Chief - Hydraulics & Hydrology Branch
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Mr. Scott Henderson
Chief - Water Management
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Ms. Michelle Lay
Chief - Civil Design Section
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Mr. David Blackmore
Engineering Branch, Infrastructure Section
Tulsa District Corps of Engineers
1645 S. 101 E. Avenue
Tulsa, Oklahoma 74128-4629

Mr. Eddie Streater
Regional Director, Eastern Oklahoma Region
Bureau of Indian Affairs
P.O. Box 8002
Muskogee, Oklahoma 74402-8002

Mr. Christopher Best
District Conservationist
Natural Resources Conservation Service
4850 N. Lincoln Blvd.
Oklahoma City, Oklahoma 73116

Ms. Sharon Gordon-Ribeiro
Tulsa Field Office Director
U.S. Housing & Urban Development
Williams Center Tower II, 2 West Street, Ste. 400
Tulsa, Oklahoma 74103

Ms. Sue E. Masica
Regional Director - Intermountain Region Office,
Planning & Environmental Quality
National Park Service
12795 W. Alameda Parkway
Denver, Colorado 80225

Mr. Steve Spencer
Regional Environmental Officer
U.S. Department of the Interior
1001 Indian School NW, Suite 348
Albuquerque, New Mexico 87104

Mr. Victor N. Bird
Director
Oklahoma Aeronautics Commission
120 N. Robinson, Suite 1244W
Oklahoma City, Oklahoma 73102

Mr. Tim Baker
Director - Oil & Gas Division
Oklahoma Corporation Commission
Jim Thorpe Building, 2101 N. Lincoln Blvd.
Oklahoma City, Oklahoma 73105

Environmental Review Coordinator
DEQ Customer Assistance Program
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Ms. Melvena Heisch
Deputy Historic Preservation Officer
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, Oklahoma 73105-7917

Ms. Deby Snodgrass
Secretary of Commerce and Tourism,
Executive Director of Commerce
Oklahoma Department of Commerce
900 North Stiles
Oklahoma City, Oklahoma 73104

Mr. J. D. Strong
Director
Department of Wildlife Conservation
P.O. Box 53465
Oklahoma City, Oklahoma 73152

Mr. Trey Lam
Executive Director
Oklahoma Conservation Commission
2800 North Lincoln Blvd., Ste. 160
Oklahoma City, Oklahoma 73105

Mr. Jim Reese
Commissioner of Agriculture
Department of Agriculture
2800 N. Lincoln Blvd., P.O. Box 54298
Oklahoma City, Oklahoma 73105-4298

Ms. Julie Cunningham
Interim Executive Director
Oklahoma Water Resources Board
3800 North Classen
Oklahoma City, Oklahoma 73118

Dr. Jeremy Boak
Director
Oklahoma Geological Survey
100 East Boyd, Room N-131
Norman, Oklahoma 73019-0628

Dr. Kary Stackelbeck
Oklahoma State Archeologist
111 East Chesapeake, Building 134
Norman, Oklahoma 73019-5111

Ms. Joy Hofmeister
State Superintendent
State Department of Education
2500 North Lincoln Blvd., Rm. 121
Oklahoma City, Oklahoma 73105-4599

Ms. Kristina S. Marek
Director, State Parks
Oklahoma Tourism & Recreation Department
900 North Stiles
Oklahoma City, Oklahoma 73104

Chairperson John A. Barrett
Citizen Pottawatomie Nation
1601 S. Gordon Cooper Drive
Shawnee, Oklahoma 74801

Chairman Bobby Walkup
Iowa Tribe Of Oklahoma
Rte 1, Box 721
Perkins, Oklahoma 74059

Chairperson David Pacheco, Jr.
Kickapoo Tribe Of Oklahoma
P.O. Box 70
McLoud, Oklahoma 74851

Principal Chief Geoffrey Standing Bear
Osage Nation
627 Grandview
Pawhuska, Oklahoma 74056

President Terri Parton
Wichita And Affiliated Tribes
P.O. Box 729
Anadarko, Oklahoma 73005

**APPENDIX B
OFFICIALS NOTICE LETTER
AND MAILING LIST**





December 23, 2016

Mr. Tim Vermillion
Oklahoma Department of Transportation
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

Re: Public Meeting Letters, I-40 and Douglas, JP 28992(04)

Dear Tim:

This letter is to document that Triad Design Group mailed 20 solicitation letters, 50 officials letters, and 26 landowner/utility letters for the above-referenced project on December 23, 2016. All letters were sent via USPS.

I personally checked the contents of all the envelopes, and checked that the letter inside address matched the envelope address. If you have any comments or questions, please feel free to call me at 405-919-0481.

Sincerely,

A handwritten signature in cursive script that reads "Diane Abernathy".

Diane Abernathy, P. E.
Senior Project Manager

Triad Project E211-06

December 22, 2016

Inside Address

RE: I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No: J2-8992(004)

Dear _____:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma. The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes. Replacement of the Douglas Boulevard bridge will require I-40 to be lowered to provide the required vertical clearance of 16-ft-9-in. Also, the bridge replacement project will require reconstruction of the I-40/Douglas Boulevard interchange. ODOT recently tasked a consultant to study several interchange improvement alternatives while taking into consideration construction cost, right-of-way requirements, and environmental constraints.

A Public Meeting is being held to present the project information on **January 17, 2017, 6:00 p.m.** in the Raider Room of the Bill Atkinson Student Center at Rose State College, 6420 SE 15th Street, Midwest City, Oklahoma. The purpose of the Public Meeting is to solicit public and agency input on the proposed improvements for further consideration.

Should you have any questions regarding the project, please contact our Consultant, Diane Abernathy, Triad Design Group, at 405-919-0481, dabernathy@triaddesigngroup.com or Tim Vermillion, ODOT Environmental Project Manager at 405-521-2676, tvermillion@odot.org.

Sincerely,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS:TV:Triad:DA

Enclosure: Location Map

The Oklahoma Department of Transportation (ODOT) ensures that no person or groups of persons shall, on the grounds of race, color, sex, religion, national origin, age, disability, retaliation or genetic information, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by ODOT, its recipients, sub-recipients, and contractors. If any interested individual has a disability that may require accommodation to participate in this meeting, please contact ODOT ADA Coordinator at (405) 521-4140. Upon advance notification of the need for accommodation, reasonable arrangements will be made to provide accessibility to the meeting.

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."

AN EQUAL OPPORTUNITY EMPLOYER

Mr. Mike Patterson
Director
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Russell Hulin
Deputy Director
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Casey Shell
Chief Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Tim Tegeler
Director of Engineering
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Darren Saliba
Director of Operations
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Matt Swift
Strategic Asset & Performance
Management
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Rick Johnson
Project Management Division Manager
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Caleb Austin
Roadway Design Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Ms. Siv Sundaram
Environmental Programs Division Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Robert Blackwell
Chief of Right of Way
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Harold Smart
Traffic Division Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Shannon Sheffert
Local Government Division Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. William Tackett
Chief of Survey
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Steve Jacobi
Bridge Division Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Ms. Terri Angier
Chief of Media & Public Relations
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Mr. Brian Taylor
Division IV Engineer
Oklahoma Department of Transportation
P.O. Box 471
Perry, Oklahoma 73077

Mr. Basharat Siddiqi
Division Administrator
Federal Highway Administration (FHWA)
5801 N Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73118

Commissioner Greg Love
District IV
Oklahoma Transportation Commissioner
10601 N. Pennsylvania Avenue
Oklahoma City, Oklahoma 73120

Ms. Melvena Heisch
Deputy Historic Preservation Officer
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, Oklahoma 73105

Dr. Kary Stackelbeck
Oklahoma State Archeologist
111 East Chesapeake, Building 134
Norman, Oklahoma 73019

Mr. John Johnson
Executive Director
Association of Central Oklahoma
Governments
21 E. Main Street, Suite 100
Oklahoma City, Oklahoma 73104

Mr. Cody Inman
Office of the Governor
2300 N. Lincoln Blvd., Ste. 212
Oklahoma City, Oklahoma 73105

Board of County Commissioners
Oklahoma County
320 Robert S. Kerr Ave.
Oklahoma City, Oklahoma 73102

The Honorable Matt Dukes
Mayor
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. J. Guy Henson
Midwest City, City Manager
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Daniel McClure, Jr.
Midwest City, Ward 1
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Pat Byrne
Midwest City, Ward 2
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Rick Dawkins
Midwest City, Ward 3
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Sean Reed
Midwest City, Ward 4
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Christine Allen
Midwest City, Ward 5
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Jeff Moore
Midwest City, Ward 6
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

The Honorable Mick Cornett
Mayor
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. James D. Couch
Oklahoma City, City Manager
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. James Greiner
Oklahoma City, Ward 1
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Ed Shadid
Oklahoma City, Ward 2
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Larry McAtee
Oklahoma City, Ward 3
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Pete White
Oklahoma City, Ward 4
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. David Greenwell
Oklahoma City, Ward 5
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Meg Salyer
Oklahoma City, Ward 6
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. John A. Pettis, Jr.
Oklahoma City, Ward 7
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Mark K. Stonecipher
Oklahoma City, Ward 8
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

The Honorable Gary Banz
Oklahoma House of Representatives
2300 North Lincoln Boulevard, State House,
Room 433
Oklahoma City, OK 73020

The Honorable Gary Banz
Oklahoma House of Representatives
11061 Canterbury Lane
Midwest City, OK 73130

The Honorable Tess Teague
Oklahoma House of Representatives
2300 North Lincoln Boulevard, State House,
Room 433
Oklahoma City, OK 73105

The Honorable Tess Teague
Oklahoma House of Representatives
1909 Overland Trail
Choctaw, OK 73020

The Honorable Roger Ford
Oklahoma House of Representatives
2300 North Lincoln Boulevard, State House,
Room 436
Oklahoma City, OK 73105

The Honorable Roger Ford
Oklahoma House of Representatives
PO Box 10498
Midwest City, OK 73140

The Honorable Charlie Joyner
Oklahoma House of Representatives
2300 North Lincoln Boulevard, State House,
Room 436
Oklahoma City, OK 73105

The Honorable Charlie Joyner
Oklahoma House of Representatives
3500 Bella Vista Drive
Midwest City, OK 73110

The Honorable Jack Fry
Oklahoma Senate
2300 North Lincoln Boulevard, State House,
Room 413A
Oklahoma City, OK 73105

The Honorable Tom Cole
U.S. House of Representatives
2424 Springer Drive
Norman, OK 73069

The Honorable Tom Cole
U.S. House of Representatives
2467 Rayburn House Office Building
Washington, DC 20515

The Honorable Steve Russell
U.S. House of Representatives
128 Cannon House Office Building
Washington, DC 20515

The Honorable Steve Russell
U.S. House of Representatives
4600 SE 29th, Suite 400
Del City, OK 73115

The Honorable James Inhofe
U.S. Senate
1900 NW Expressway #1210
Oklahoma City, OK 73118

The Honorable James Inhofe
U.S. Senate
205 Russell Senate Office Building
Washington, DC 20510

The Honorable James Lankford
U.S. Senate
1015 North Broadway Avenue, Suite 310
Oklahoma City, OK 73102

The Honorable James Lankford
U.S. Senate
316 Hart Senate Office Building
Washington, DC 20510

Ms. Aurora Lora
Superintendent
Oklahoma City Public Schools
900 North Klein
Oklahoma City, OK 73106

Dr. Rick Cobb, Ph.D.
Mid-Del School District
7217 SE 15th Street
Midwest City, OK 73110

Rose State College
6420 SE 15th Street
Midwest City, OK 73110

Chief Bert Norton
Midwest City Fire Department
8201 E Reno Ave
Midwest City, OK 73110

Chief Brandon Clabes
Midwest City Police Department
100 N Midwest Boulevard
Midwest City, OK 73110

Administrator
AllianceHealth Midwest
2825 Parklawn Drive
Midwest City, OK 73110

Administrator
St. Anthony Healthplex East
3400 S Douglas Blvd
Oklahoma City, OK 73150

Mr. Brad Beam
Tinker Air Force Base
72 ABW/CE
Attn. Beam 7535 5th Street, Building 400
Tinker AFB, OK 73145

Mr. Michael Daly
Tinker Air Force Base
72 ABW/CE
Attn. Daly 7535 5th Street, Building 400
Tinker AFB, OK 73145

Colonel Stephanie Wilson
Tinker Air Force Base
72 ABW/CC
7460 Arnold St., Suite 234
Tinker AFB, OK 73145

**APPENDIX C
LANDOWNER AND UTILITY
NOTICE LETTER
AND MAILING LIST**



December 23, 2016

Mr. Tim Vermillion
Oklahoma Department of Transportation
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

Re: Public Meeting Letters, I-40 and Douglas, JP 28992(04)

Dear Tim:

This letter is to document that Triad Design Group mailed 20 solicitation letters, 50 officials letters, and 26 landowner/utility letters for the above-referenced project on December 23, 2016. All letters were sent via USPS.

I personally checked the contents of all the envelopes, and checked that the letter inside address matched the envelope address. If you have any comments or questions, please feel free to call me at 405-919-0481.

Sincerely,

A handwritten signature in cursive script that reads "Diane Abernathy".

Diane Abernathy, P. E.
Senior Project Manager

Triad Project E211-06



OKLAHOMA DEPARTMENT OF TRANSPORTATION

Environmental Programs Division

200 N.E. 21st Street
Oklahoma City, OK 73105-3204
www.odot.org

December 22, 2016

RE: I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No: J2-8992(004)

Dear Property Owner/Utility Company:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma. The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40, should be widened from four lanes to six lanes. Replacement of the Douglas Boulevard bridge will require I-40 to be lowered to provide the required vertical clearance of 16-ft-9-in. Also, the bridge replacement project will require reconstruction of the I-40/Douglas Boulevard interchange.

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A Public Meeting is being held to present the project information on **January 17, 2017, 6:00 p.m.** in the Raider Room of the Bill Atkinson Student Center at Rose State College, 6420 SE 15th Street, Midwest City, Oklahoma. The purpose of the Public Meeting is to solicit public and agency input on the proposed improvements for further consideration.

If you are currently leasing this property, please notify your lessee of the planned meeting.

Should you have any questions regarding the project, please contact our Consultant, Diane Abernathy, Triad Design Group, at 405-919-0481, dabernathy@triaddesigngroup.com or Tim Vermillion, ODOT Environmental Project Manager at 405-521-2676, tvermillion@odot.org.

Sincerely,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS:TV:Triad:DA

Enclosure: Location Map

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AN EQUAL OPPORTUNITY EMPLOYER

TWODSVENTURE1, LLC
252 NW 70TH ST
OKLAHOMA CITY, OK 73116-7807

NEWHEY FAMILY PARTNERS
PO BOX 50471
MIDWEST CITY, OK 73140-5471

N R FARD INC
405 WALTHAM ST #189
LEXINGTON, MA 02421-7934

STANLEY, INC
6508 S COUNTRY CLUB DRIVE
OKLAHOMA CITY, OK 73159-2942

AMPLE STORAGE LLC
4117 S POST RD
OKLAHOMA CITY, OK 73150

VIERSEN OIL & GAS CO
PO BOX 702708
TULSA, OK 74170-2708

PINKERTON, SUE CARMEL
1701 E FAIRLAWN
CUSHING, OK 74023-5755

MIDWEST CITY MEMORIAL HOSPITAL
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4319

CITY OF MIDWEST CITY
ATTENTION: COUNTY CLERK
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4327

JOHNSON, DONNIE B & JOANN
14050 HUMMINGBIRD DRIVE
CHOCTAW, OK 73020-7018

GRIFFIN PROPERTIES OKC LLC
MCDONALDS CORP
PO BOX 182571
COLUMBUS, OH 43218

LEX LLC
PO BOX 10537
MIDWEST CITY, OK 73140-1537

GRIFFIN PROPERTIES OKC, LLC
3025 GRIFFIN CENTER
OKLAHOMA CITY, OK 73150-1000

GRIFFIN PROPERTIES OKC, LLC
C/O LJS #24034
1024 SERPENTINE LN , STE 101
PLEASANTON, C , 94566

2917 S DOUGLAS LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

SHAW INVESTMENT PROPERTIES, LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

WATERMARKED KH LLC
PO BOX 300125
MIDWEST CITY, OK 73140-0125

GRIFFIN JACK L & RUTH M
3025 GRIFFIN CTR
OKLAHOMA CITY, OK 73150-1000

MR. PATRICK MENEFFEE
CITY OF MIDWEST CITY
100 N. MIDWEST BLVD.
MIDWEST CITY, OK 73110

MS. CINDY MORGAN
CITY OF OKLAHOMA CITY
420 W. MAIN, SUITE 500
OKLAHOMA CITY, OK 73102

MR. WOODY HARJO
AT&T
6632 MELROSE LANE
OKLAHOMA CITY, OK 73127

MS. ELLEN HARRIS
ONG GAS TRANSMISSION
401 N. HARVEY AVENUE
OKLAHOMA CITY, OK 73102

MS. RAE LAWRENCE
OG&E
PO BOX 321
OKLAHOMA CITY, OK 73101

MR. RANDY LINGLE
PHILLIPS 66
201 NW. 63RD STREET, SUITE 300
OKLAHOMA CITY, OK 73116

MR. CODY PRES GROVE
SCISSORTAIL ENERGY/COPANO
ROUTE 3, BOX 137
DUNCAN, OK 73533

MR. ALAN STEVENSON
OCAN
200 NE 21ST STREET
OKLAHOMA CTIY, OK 73105

APPENDIX D
PUBLIC MEETING SIGN-IN SHEETS





PUBLIC MEETING SIGN-IN SHEET

WWW.ODOT.ORG/PUBLICMEETINGS

(Please Print Clearly)

XXXXXXXX 18:00

SH-XX in XXXXXX County (City) / JP: XXXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]			
<input type="checkbox"/> Mr.	Frank V. Roesler III froesler@odot.org	200 N.E. 21st Street Oklahoma City, OK 73105 (405) 521-2350	Oklahoma Department of Trans. SAPM Division Office of Public Involvement	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Clinton A. Tillette ctillett@odot.org	200 N.E. 21st Street Oklahoma City, OK 73105 (405) 522-1041	Oklahoma Department of Trans. SAPM Division Office of Public Involvement	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input checked="" type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Timothy Vermillion tverm@kmeodot.org	200 N.E. 21 Street OKC, OK 73105 405 522-2676	ODOT Environmental	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Melissa Evans mevans@trindesigngroup.com	3020 NW 14th St. Oklahoma City, OK 73134	Trind Design Group	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Marie Bootwe marieb@cox.net	11123 Burning Oaks OKC 73150		<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Lindsey Johnson lindsey.johnson@hilton.com	1833 Center Drive Midwest City OK 73110	Kusum Hospitality	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input checked="" type="checkbox"/> Ms.				<input checked="" type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Peranda Perry	ODOT	NPR	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Jeff James	3000 United Boulevard Suite 119 OKC, OK 73112	Don Minn State Conv	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other



ODOT

PUBLIC MEETING SIGN-IN SHEET

WWW.ODOT.ORG/PUBLICMEETINGS

(Please Print Clearly)

XX/XX/XX 18:00

SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]			
<input type="checkbox"/> Mr.	BRAD Taylor		ODOT	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Lisa Salim		ODOT MPR	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	GEORGE BENARD		ST Anthony Hospital	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input checked="" type="checkbox"/> Mr.	Glenn Goldschlager		SELF	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input checked="" type="checkbox"/> Mr.	Jimmy DURANT		ST. ANTHONY HOSPITAL	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input checked="" type="checkbox"/> Mr.	FRED HAWK fhawk@cox.net			<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Kary Hunt		City of MWC	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input checked="" type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Dawn Sullivan		ODOT	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black		
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		



ODOT

PUBLIC MEETING SIGN-IN SHEET

WWW.ODOT.ORG/PUBLICMEETINGS

(Please Print Clearly)

XX/XX/XX 18:00

SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]		
<input checked="" type="checkbox"/> Mr.	Russell Bode	11123 Banning Oaks Rd Oklahoma City, OK 73155	Tinker TAG Agency	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Ken Newey	2839 S. Douglas Site 112 mwc ok. 73130		<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Michael Sharkness	200 NE 21st ST Oklahoma City OK 71102	Oklahoma Department of Transportation	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	John Sheaf	4205 N. Lincoln Blvd OKC, OK 73105	AWG	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	JARED SCHWENKESER		ODOT ENV	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Siv Sundaran		N	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input checked="" type="checkbox"/> Female	<input checked="" type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Brad Beam	734-3451	Tinker AFB	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Dannal Nantz	420 W main	The City of Oklahoma City	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other



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XX/XX/XX 18:00

SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]						
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.		405-741-5276		<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mrs.	Susan Evans	16509 SE 44th St		<input checked="" type="checkbox"/> Female	<input type="checkbox"/> White	<input checked="" type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Hao Liu	405-720-7721	Traffic Engineering Consultants.	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.		6000 S. Western Ste 300		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.		15601 KESTRAL PARK CT		<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	RAKESH SHRIVASTAVA	EDMOND, OK-73013		<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.	RS243@HOTMAIL.COM			<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	BILLY HARKES	100 N MIDWEST BLVD	CITY OF MUK	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.	harkes@midwestcityok	MIDWEST CITY OK 73110		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Nicholas Ajimine	1970 Potter Ct.		<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.		MWC, OK 73130		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.		(580) 284-1638		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input checked="" type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Debbie Sapp	12815 Marshall		<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Ms.		Choctaw, OK 73020		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.		(405) 740-9609		<input checked="" type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Mr.	Roger Ford	4908 KENNINGTON	State Representative	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.		OKC 73150		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Debbay Williams	3924 Coventry Ln	Creative Design Resolutions	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Ms.		Norman, OK 73072		<input type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<input type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Female	<input type="checkbox"/> White	<input type="checkbox"/> Asian	<input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black	<input type="checkbox"/> Other



ODOT

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XX/XX/XX 18:00

SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]			
<input checked="" type="checkbox"/> Mr.	Mr. Khan mkhan@somco.com	815 W. Main OKC, OK 73106	SMC	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White <input checked="" type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	Laurie Charlie Efinger	19250 Ranchwood Harrah OK 73045		<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	LAUREN WING			<input type="checkbox"/> Male	<input type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	Kevin Burns			<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Robert Mallette amallette95@gmail	9489 Rhy Ann Rd. Mug OK 73138	Base Roots Homes	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input checked="" type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Katrina Fire	ODOT		<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	ROBERT FAYHO	ODOT		<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Cindy Mikeman	12200 Jaycie Circle Midwest City, OK (405) 259-9094	Rose State College	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Asian <input type="checkbox"/> Native American	<input type="checkbox"/> Hispanic <input type="checkbox"/> Black <input type="checkbox"/> Other	



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NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]			
<input type="checkbox"/> Mr.	Di Abernathy	OKC, OK	TRIAD	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.	dabernathy@triaddesigngroup.com	405-919-0481		<input checked="" type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	David Buren	502-7602	ODOT	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.	dgsuren@odot.in			<input type="checkbox"/> Female	<input checked="" type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Juan Kang	11708 S. Grandway Meridian, MS New Valley, OK 74485		<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.		405-990-3037		<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input checked="" type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	DAVID SAULSBERRY	2326 BERRY LN MWC, OK 73130		<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.		405-821-2247		<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Ellen Mallette	512 E Lockwood Dr MWC, OK 73110		<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input checked="" type="checkbox"/> Ms.		405-517-3298		<input checked="" type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.			Triad Design	<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Joe Davis			<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input type="checkbox"/> Mr.	Susan Davis		Triad Desig	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	
<input checked="" type="checkbox"/> Mr.	Craig Mussatto	3801 S. Post Rd OKC, OK 73150	Tony's Tree Plantation	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other	



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SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]			
<input type="checkbox"/> Mr.	PATRYNE	1202 THREE OAKS CIR MWC	MWC Council	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Guy Hensen	100 W. Midwest Bldg MWC OK 73110	City Manager City of MWC	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input checked="" type="checkbox"/> Mr.	GARY W. BANZ	11061 Canterbury LN MWC, OK 73130	Former St. Rep.	<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.	Larry Poland	9320 NE 13 st MWC, OK 73130		<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic	<input type="checkbox"/> Black
<input type="checkbox"/> Ms.				<input type="checkbox"/> Asian	<input type="checkbox"/> Black	<input type="checkbox"/> Other	
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Native American	<input type="checkbox"/> Other		



DOT

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SH-XX in XXXXXX County (City) / JP: XXXXX(XX)

(Please Print Clearly)

NAME & EMAIL		ADDRESS & PHONE NUMBER	BUSINESS / ORGANIZATION	GENDER / RACE [OPTIONAL]		
<input type="checkbox"/> Mr.	Kyle Nondelet		St. Anthony	<input checked="" type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.	Kyle Nondelet@smhondt.com			<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Liz MacBean	110 Hudson Pl. MWC	Gardener	<input type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input checked="" type="checkbox"/> Ms.				<input type="checkbox"/> Male	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input checked="" type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.	Randy Lee	522-1447	ODOT-SAPH	<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
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<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
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<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other
<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Ms.				<input type="checkbox"/> Female	<input type="checkbox"/> Asian	<input type="checkbox"/> Black
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<input type="checkbox"/> Mr.				<input type="checkbox"/> Male	<input type="checkbox"/> White	<input type="checkbox"/> Hispanic
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<input type="checkbox"/> Mrs.				<input type="checkbox"/> Female	<input type="checkbox"/> Native American	<input type="checkbox"/> Other



MEDIA SIGN-IN SHEET

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NAME	PHONE or EMAIL	STATION
Jeff Harrison Midwest City Bracan	455-1110 Newsp @ midwestcitybracan.com	
Randy Lee		

APPENDIX E
PUBLIC MEETING PRESENTATION







**I-40/Douglas Boulevard
Bridge Replacement
and
Interchange
Reconstruction**
Oklahoma County


Public Meeting


January 17, 2017



Stakeholders

I-40/Douglas Improvements





Meeting Purpose

I-40/Douglas Improvements



- Purpose and Need for Project
- 3 Interchange Alternatives Considered
- Public Input/Feedback



Project Location & The Surrounding Area

I-40/Douglas Improvements



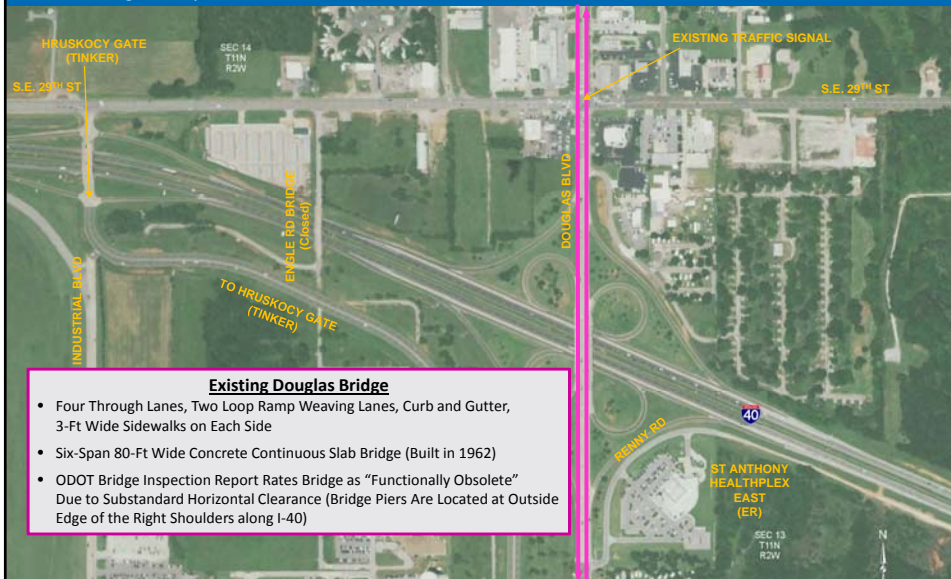
Existing Douglas Boulevard and Bridge

I-40/Douglas Improvements



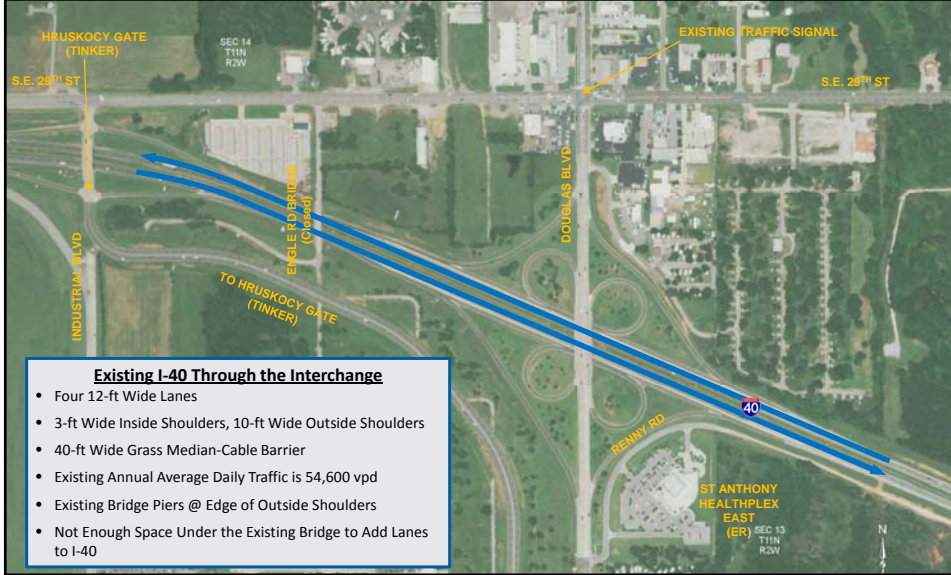
Existing Douglas Boulevard and Bridge

I-40/Douglas Improvements



Existing I-40

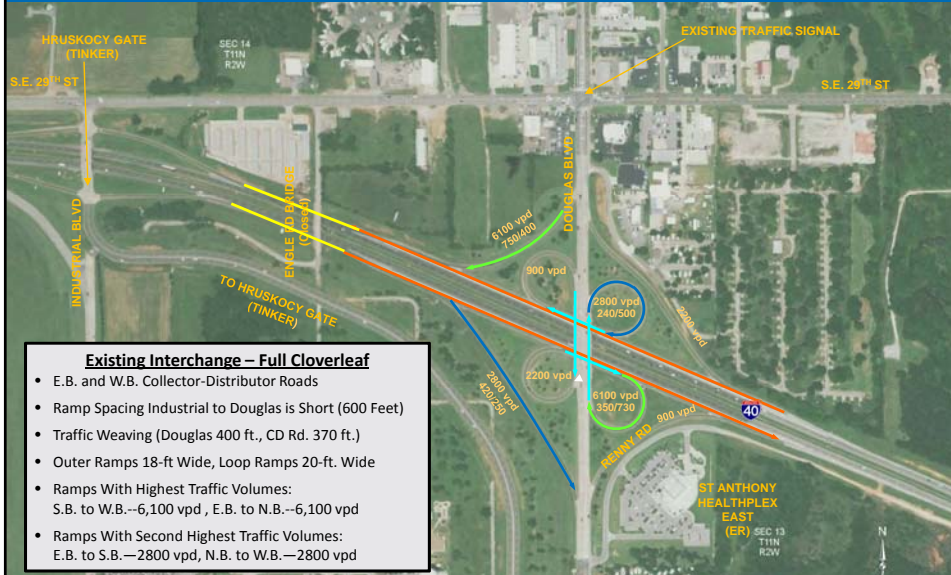
I-40/Douglas Improvements



- Existing I-40 Through the Interchange**
- Four 12-ft Wide Lanes
 - 3-ft Wide Inside Shoulders, 10-ft Wide Outside Shoulders
 - 40-ft Wide Grass Median-Cable Barrier
 - Existing Annual Average Daily Traffic is 54,600 vpd
 - Existing Bridge Piers @ Edge of Outside Shoulders
 - Not Enough Space Under the Existing Bridge to Add Lanes to I-40

Existing I-40/Douglas Interchange

I-40/Douglas Improvements



- Existing Interchange – Full Cloverleaf**
- E.B. and W.B. Collector-Distributor Roads
 - Ramp Spacing Industrial to Douglas is Short (600 Feet)
 - Traffic Weaving (Douglas 400 ft., CD Rd. 370 ft.)
 - Outer Ramps 18-ft Wide, Loop Ramps 20-ft. Wide
 - Ramps With Highest Traffic Volumes:
S.B. to W.B.--6,100 vpd , E.B. to N.B.--6,100 vpd
 - Ramps With Second Highest Traffic Volumes:
E.B. to S.B.—2800 vpd, N.B. to W.B.—2800 vpd

Collision History

I-40/Douglas Improvements



Purpose and Need

I-40/Douglas Improvements



- Correct Functionally Obsolete Douglas Boulevard Bridge
- Improve Safety



Proposed Project

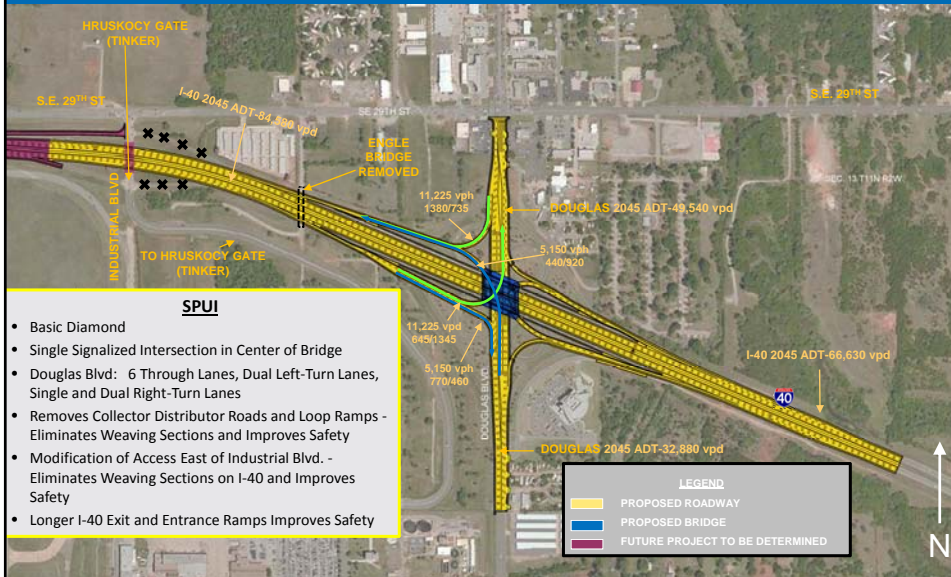
I-40/Douglas Improvements



- Replace Douglas Boulevard Bridge
- Widen I-40 from 4 Lanes to 6 Lanes
- Improve I-40/Douglas Boulevard Interchange
- 3 Interchange Alternatives
 - Single Point Urban Interchange (SPUI)
 - Tight Urban Diamond Interchange (TUDI) with Future Flyover
 - Cloverleaf Reconstruction
- Remove Engle Road Bridge Over I-40
- Modify Access At I-40 and Industrial Blvd. Interchange to Improve Safety and Operations between Industrial Blvd. and Douglas Blvd.



Alternative 1 Single Point Urban Interchange (SPUI)



- SPUI**
- Basic Diamond
 - Single Signalized Intersection in Center of Bridge
 - Douglas Blvd: 6 Through Lanes, Dual Left-Turn Lanes, Single and Dual Right-Turn Lanes
 - Removes Collector Distributor Roads and Loop Ramps - Eliminates Weaving Sections and Improves Safety
 - Modification of Access East of Industrial Blvd. - Eliminates Weaving Sections on I-40 and Improves Safety
 - Longer I-40 Exit and Entrance Ramps Improves Safety

Alternative 1 Single Point Urban Interchange (SPUI)

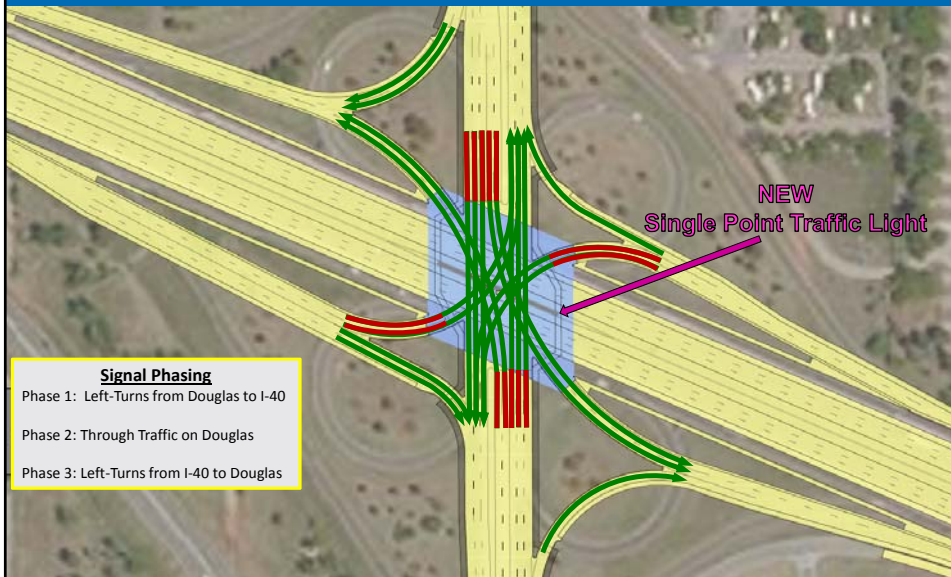


What is a SPUI?

- Grade Separated Two Level Diamond
- One Large Intersection Instead of Two Separate Diamond Ramp Intersections
- At-Grade Intersection is Located at the Center of the Interchange and is Signalized
- All Through Arterial Traffic and All Traffic Turning Left Onto or From the Interchange Ramps is Controlled with the Signal
- The Right Turn Movements May Be Free-Flow (Merge or Yield) or Signalized. Right-Turns Do Not Pass Through the Central Signal
- For Left Turns, Opposing Traffic is on the Right



Alternative 1 Single Point Urban Interchange (SPUI)



Alternative 1 Single Point Urban Interchange (SPUI)



Alternative 1 Single Point Urban Interchange (SPUI)



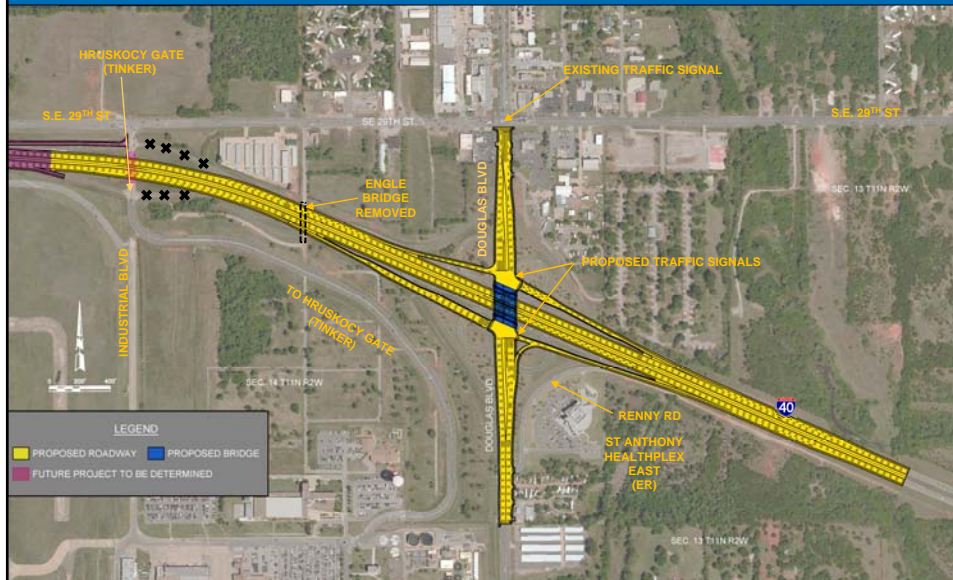
When To Consider a SPUI?

- Traffic Volumes are High and There is Major Congestion
- Left Turn Volumes are High
- Right-of-Way is Restricted
- Truck Volumes are High

In Most Cases When We Consider A SPUI as an Interchange Alternative, We Also Evaluate a Tight Urban Diamond Interchange (TUDI) as an Alternative as Well.



Alternative 2 Tight Urban Diamond Interchange (TUDI)



Alternative 2 Tight Urban Diamond Interchange (TUDI) With Future Ramp Flyover



What is a TUDI?

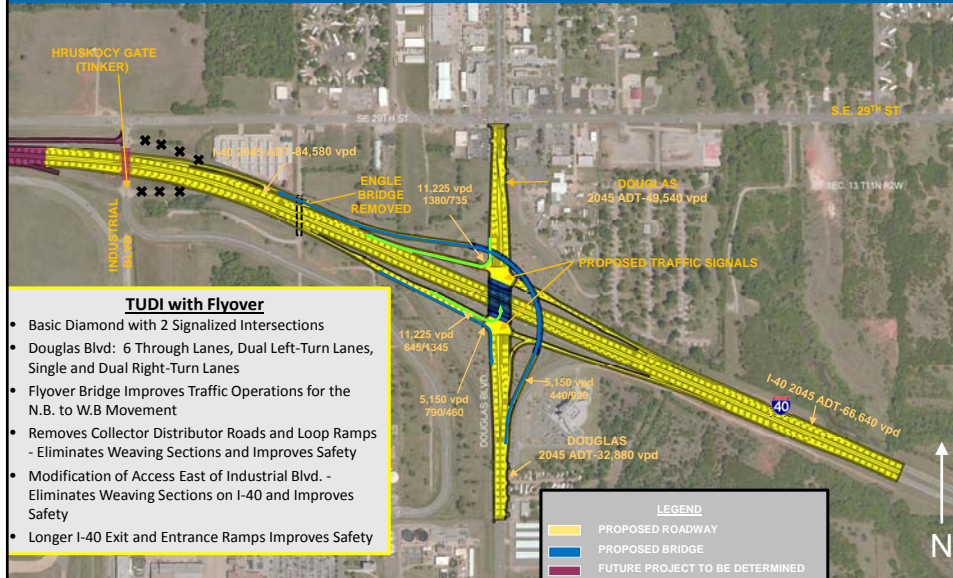
- Grade Separated Two Level Diamond
- Two Separate Diamond Ramp Intersections
- Ramp Spacing 250'-400' (Operates Better Than Wider Diamonds)
- Two Continuous Left-Turn Lanes for Each Direction Between Signals
- Typically Costs Less Than a SPUI Due to Smaller Bridge
- Good Option When Right-of-Way is Restricted
- Accommodates High Traffic Volumes

Initial Construction is the TUDI.

Future Ramp Flyover Would Be Constructed In the Future
When Warranted



Alternative 2 Tight Urban Diamond Interchange (TUDI) With Future Ramp Flyover



Alternative 3 Reconstruction of Cloverleaf Interchange



Constraints Mapping

I-40/Douglas Improvements



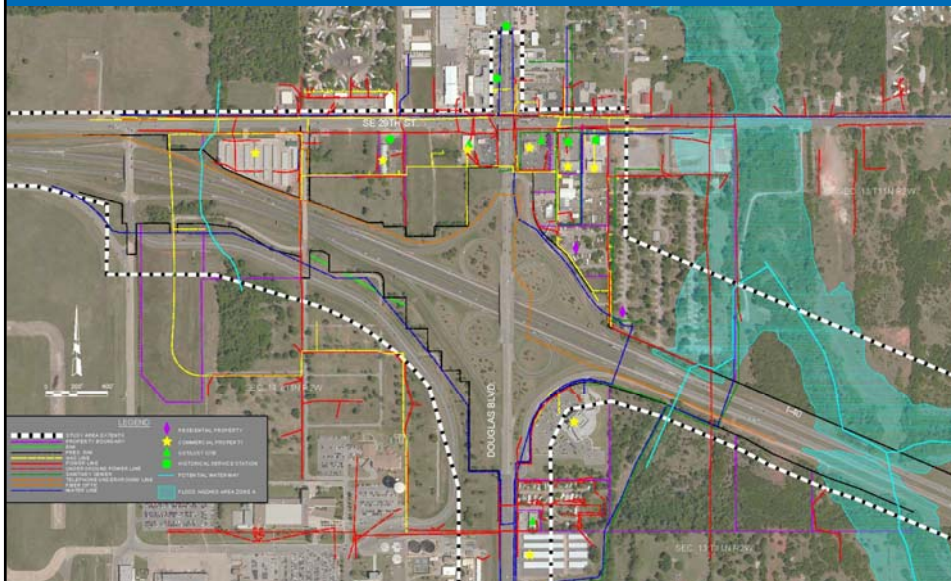
Reconnaissance Performed to Identify Constraints

- Wetlands and Waters
- Threatened & Endangered Species Critical Habitat
- Archeological Sites and Historic Properties
- Aboveground or Underground Storage Tanks
- Oil/Gas Wells
- Residences
- Commercial Facilities
- Tribal Properties
- Utilities



Composite Constraints Map

I-40/Douglas Improvements



Comparison of Alternatives



I-40/Douglas Improvements

Comparison Parameters	Alternative 1 Single Point Urban Interchange (SPUI)	Alternative 2 Tight Urban Diamond Interchange (TUDI) with Future Ramp Flyover	Alternative 3 Cloverleaf Interchange Reconstruction
Traffic Operations¹	<ul style="list-style-type: none"> I-40 Facilities: Good 1 Interchange Signal on Douglas SPUI Operates Better than TUDI for All Movements Except NB to WB Movement 	<ul style="list-style-type: none"> I-40 Facilities: Good 2 Interchange Signals on Douglas NB to WB Movement Operates Better than SPUI (All Other Movements Operate Better With the SPUI) 	<ul style="list-style-type: none"> I-40 Facilities: Good No Interchange Signal on Douglas Traffic on Douglas Remains Free-Flow Weaving on Douglas and CD Roads Remains
Interchange Geometry	<ul style="list-style-type: none"> Ramp Design Speed 50 mph All Weaving Eliminated Flat Dual Left-Turn Curves Allow for Ease of Movement Between Ramps and Douglas 	<ul style="list-style-type: none"> Ramp Design Speed 35-50 mph All Weaving Eliminated Dual Left-Turns Between Ramps and Douglas Will Be at Slow Speed Due to Ramp Intersection Angles 	<ul style="list-style-type: none"> Ramp Design Speed 20 mph Loops and Weaving on Douglas and CD Roads Remain CD Roads Reconstructed 2 Lanes Wide in Ramp Merge Areas
Environmental Impacts²	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts
Utility Relocations	7 Utilities Impacted	7 Utilities Impacted	7 Utilities Impacted
Right-of-Way Impacts	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County
Total Project Cost	\$47 million	\$56 million	\$45 million

Colors are to aid visual comparison only; i.e., green, yellow, and red indicate which alternate is better, neutral, and worse, respectively, for each parameter of comparison. The color scheme has relevance only to the comparison of Alternatives 1, 2, and 3, and is not meant to imply any parameter is "ideal", as compared to other projects or situations.

Notes:

1: By 2045, the Douglas & 29th Street intersection will need additional lanes to ensure proper interchange operations. In addition, eastbound to northbound pm traffic will need an additional route alternative to ensure proper interchange operations.

2: No other environmental constraints identified.



What Happens Next? / Process



I-40/Douglas Improvements

- Consider Comments from Public Meeting
- Select a Preferred Interchange Alternative & Complete Preliminary Design Report
- Complete Detailed Environmental Studies and Design Plans
- 8-Year Construction Work Plan:
 - Right-of-Way (Year 2017)
 - Utilities (Year 2017)
 - Construction (Year 2020)



Submit Your Comments

I-40/Douglas Improvements



- Leave your written comments with us tonight.
- Download and submit a comment form at:
www.odot.org/publicmeetings
- Submit your written comments by mail to:
Oklahoma Department of Transportation
Environmental Programs Division
200 N. E. 21st Street
Oklahoma City, OK 73105
- Fax your written comments to:
(405) 522-5193
- Email your comments to:
Odot-environment@odot.org
- **Please submit your comments by January 31, 2017.**



I-40/Douglas Boulevard Improvements



*Thank
you!*



APPENDIX F
PUBLIC MEETING HANDOUT AND DISPLAYS



NOTES



January 17th, 2017 @ 6:00 P.M.
 Bill Atkinson Center: Raider Room | Rose State College | 6420 S.E. 15th St. | Midwest City, OK 73110

PUBLIC MEETING

I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction Oklahoma County, OK • JP: 28992(04) Presentation of Proposed Improvements & Solicitation of Public Input

Purpose of Meeting

To present and get public input on the Douglas Boulevard bridge replacement and three (3) interchange improvement alternatives under consideration for the I-40/Douglas Boulevard interchange, located 6.5 miles east of I-35 in Oklahoma City, Oklahoma.

Project Background

The Oklahoma Department of Transportation (ODOT), in cooperation with Federal Highway Agency (FHWA), is soliciting comments on possible improvements to the I 40 and Douglas Boulevard bridge and interchange in Oklahoma County, Oklahoma.

The Douglas Boulevard bridge over I-40 is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft wide sidewalks on each side of the bridge. The existing Douglas Boulevard bridge is an 80-ft wide concrete continuous slab bridge, with a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16-ft-9-in (eastbound) and 16-ft-4-in (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 47,980 vpd by the year 2045.

I-40 underneath Douglas Blvd is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The current AADT on I-40 is 54,574 vehicles per day (vpd), and is projected to increase to 84,580 vpd by the year 2045. The existing I 40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40. The number of collisions at this location is higher than the state average at similar locations.

The existing Engle Road bridge over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists and the property is now owned by Tinker Air Force Base. Therefore, Engle Road bridge is closed to traffic and not in use.

The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes.

PROJECT INFORMATION SUMMARY

- Total Programmed Estimated Cost of these projects: **\$15.5 Million**
- Right-of-Way & Utility Relocation programmed to start in: **2017**
- Construction programmed to start in: **2020**
- Current Annual Average Daily Traffic (AADT) in year 2016: **26,100 Vehicles a day** (Douglas Boulevard)
- Future Estimated AADT by year 2045: **47,980 Vehicles a day** (Douglas Boulevard)
- Current Annual Average Daily Traffic (AADT) in year 2016: **54,574 Vehicles a day** (I-40)
- Future Estimated AADT by year 2045: **84,580 Vehicles a day** (I-40)
- Construction along existing alignment will require temporary construction road closures.

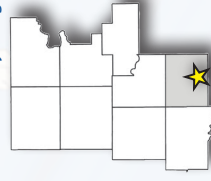
*Totals DO NOT include Toll Roads

DIVISION 4 ENGINEER: BRIAN TAYLOR, P.E.

**Totals DO NOT include County Bridges

Total Road Miles: 1,419.66 ***Total Interstate Miles:** 222.47 ****Total Bridges:** 1,144

Counties: Canadian, Garfield, Grant, Kay, Kingfisher, Logan, Noble, Oklahoma, Payne



PLEASE PROVIDE YOUR COMMENTS BY FEBRUARY 14, 2017

For more information about the project

Tim Vermillion
 NEPA Project Manager
 Division 4
 (405) 521-2676
 odot-environment@odot.org

For more information about Public Participation

Frank Victor Roesler III
 Public Involvement Officer
 Strategic Asset & Performance Management Division
 (405) 521-2350
 publicmeetings@odot.org



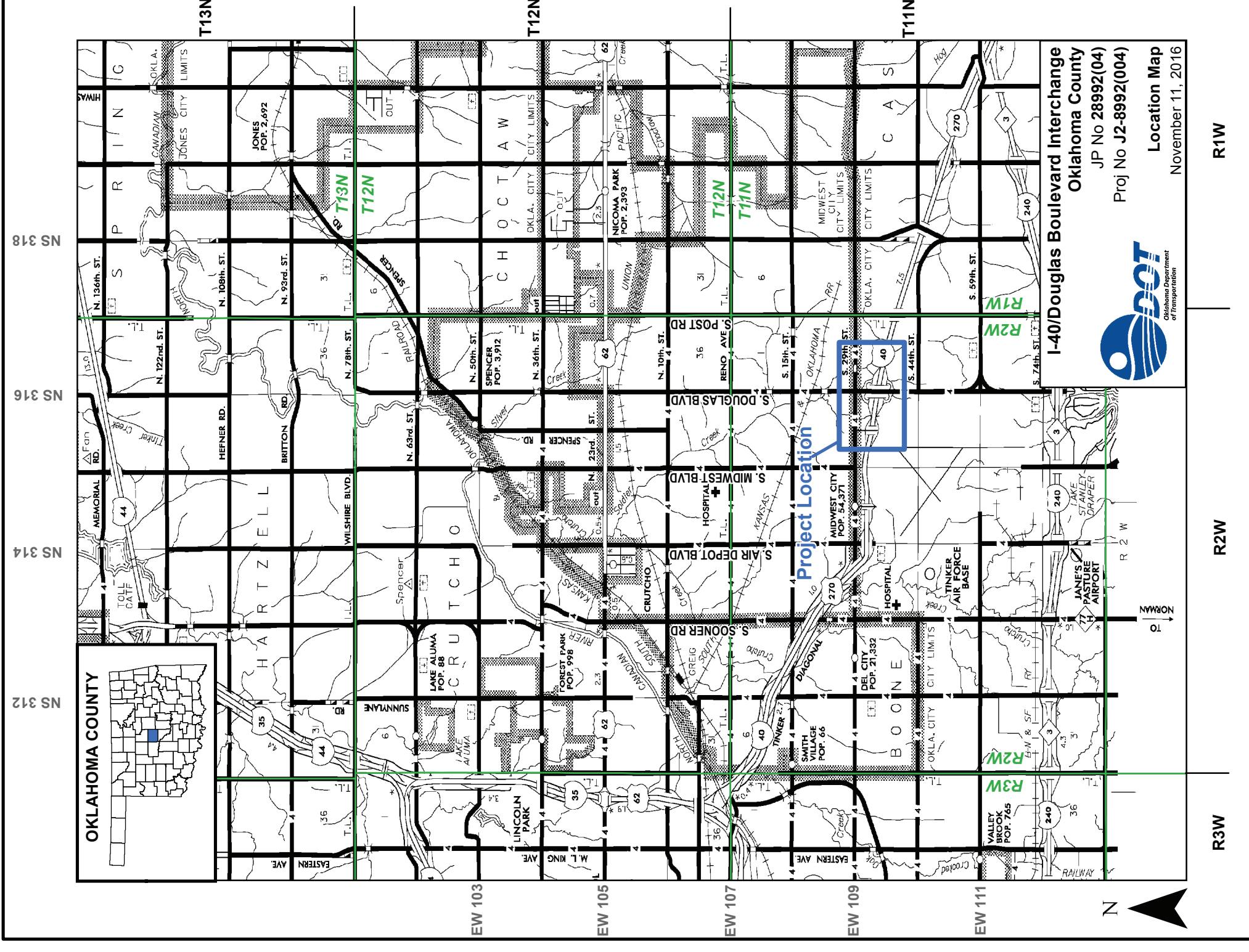
<http://www.odot.org/publicmeetings>

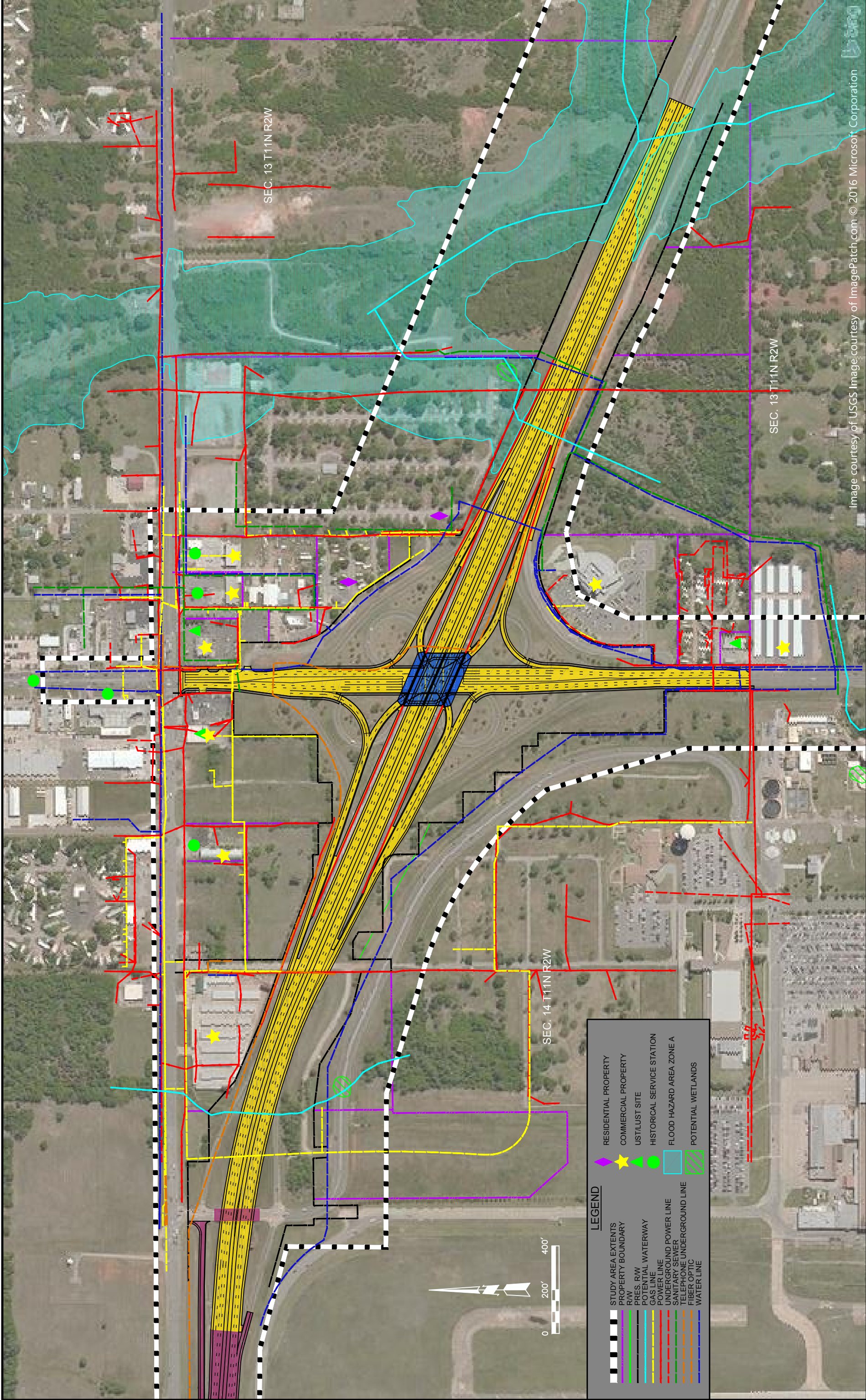
Project Description

Three (3) interchange alternatives have been identified for consideration:

- Alternative 1 - Single Point Urban Interchange (SPUI). A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover. A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- Alternative 3 - Cloverleaf Interchange. The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40.

Regardless of the interchange alternative selected, the Engle Road bridge over I-40, which is no longer in service, will be removed as a part of this project.





SEC. 13 T11N R2W

SEC. 13 T11N R2W

SEC. 14 T11N R2W

LEGEND

	STUDY AREA EXTENTS		RESIDENTIAL PROPERTY
	PROPERTY BOUNDARY		COMMERCIAL PROPERTY
	PROV. ROW		UST/ILUST SITE
	POTENTIAL WATERWAY		HISTORICAL SERVICE STATION
	GAS LINE		FLOOD HAZARD AREA ZONE A
	POWER LINE		POTENTIAL WETLANDS
	UNDERGROUND POWER LINE		
	SANITARY SEWER		
	TELEPHONE UNDERGROUND LINE		
	FIBER OPTIC		
	WATER LINE		



I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY

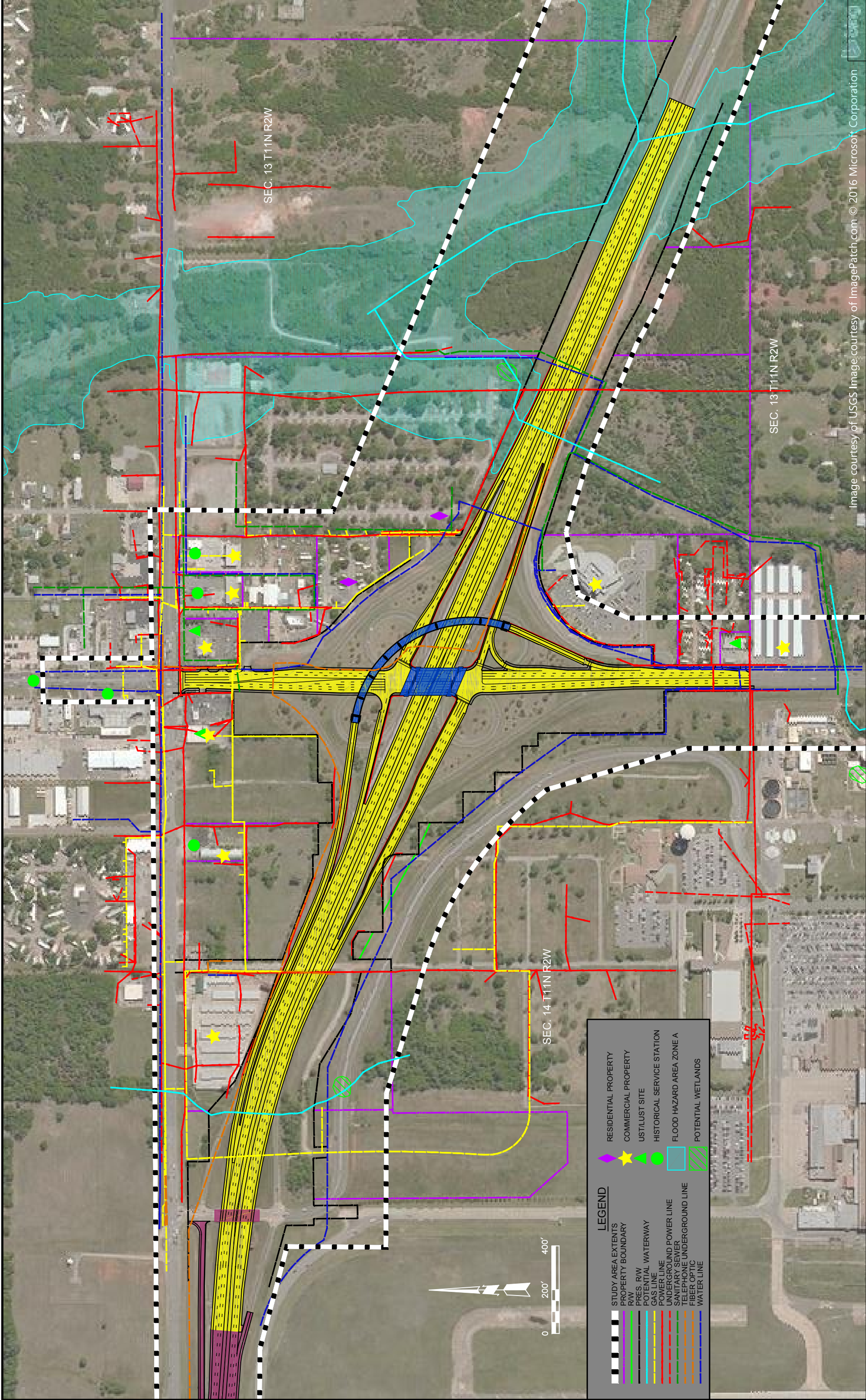
DATE: 12-14-16
SCALE: AS SHOWN
DRWN BY: ME



J/P 28992(04)

ALTERNATIVE 1
SINGLE POINT URBAN INTERCHANGE (SPUI)

Image courtesy of USGS Image courtesy of ImagePatch.com © 2016 Microsoft Corporation



SEC. 13 T 11 N R 2 W

SEC. 13 T 11 N R 2 W

SEC. 14 T 11 N R 2 W

LEGEND

	STUDY AREA EXTENTS		RESIDENTIAL PROPERTY
	PROPERTY BOUNDARY		COMMERCIAL PROPERTY
	PRES. R/W		UST/LULUST SITE
	POTENTIAL WATERWAY		HISTORICAL SERVICE STATION
	GAS LINE		FLOOD HAZARD AREA ZONE A
	POWER LINE		POTENTIAL WETLANDS
	UNDERGROUND POWER LINE		
	SANITARY SEWER		
	TELEPHONE UNDERGROUND LINE		
	FIBER OPTIC		
	WATER LINE		



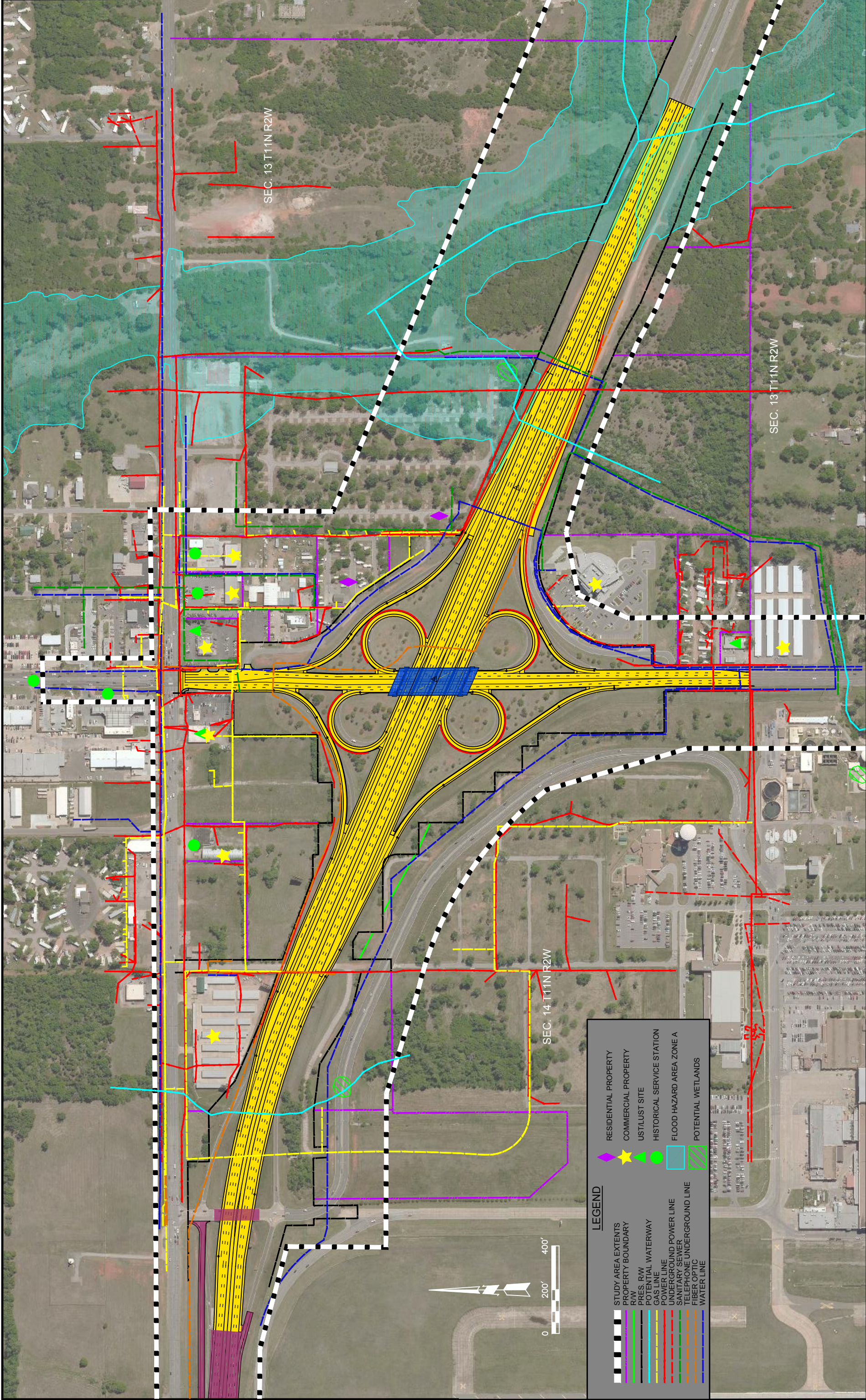
Image courtesy of USGS Image courtesy of ImagePatch.com © 2016 Microsoft Corporation

ALTERNATIVE 2
TIGHT URBAN DIAMOND INTERCHANGE (TUDI) WITH FLYOVER
 J/P 28992(04)



DATE: 12-14-16
 SCALE: AS SHOWN
 DRWN BY: ME

I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY



<p>ALTERNATIVE 3 RECONSTRUCTED CLOVERLEAF</p>	<p>TRIAD DESIGN GROUP Architecture • Engineering</p>	<p>DATE: 12-14-16 SCALE: AS SHOWN DRAWN BY: ME</p>	<p>I-40 & DOUGLAS BOULEVARD OKLAHOMA COUNTY</p>
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J/P 28992(04)

LEGEND

	STUDY AREA EXTENTS		RESIDENTIAL PROPERTY
	PROPERTY BOUNDARY		COMMERCIAL PROPERTY
	R/W		UTIL/SLUST SITE
	PRES. R/W		HISTORICAL SERVICE STATION
	POTENTIAL WATERWAY		FLOOD HAZARD AREA ZONE A
	GAS LINE		POTENTIAL WETLANDS
	POWER LINE		
	UNDERGROUND POWER LINE		
	SANITARY SEWER		
	TELEPHONE UNDERGROUND LINE		
	FIBER OPTIC		
	WATER LINE		



SEC. 13 T11N R2W

SEC. 13 T11N R2W

SEC. 14 T11N R2W

Comparison of Alternatives

I-40/Douglas Improvements



Comparison Parameters	Alternative 1 Single Point Urban Interchange (SPUI)	Alternative 2 Tight Urban Diamond Interchange (TUDI) with Future Ramp Flyover	Alternative 3 Cloverleaf Interchange Reconstruction
Traffic Operations¹	<ul style="list-style-type: none"> I-40 Facilities: Good 1 Interchange Signal on Douglas SPUI Operates Better than TUDI for All Movements Except NB to WB Movement 	<ul style="list-style-type: none"> I-40 Facilities: Good 2 Interchange Signals on Douglas NB to WB Movement Operates Better than SPUI (All Other Movements Operate Better With the SPUI) 	<ul style="list-style-type: none"> I-40 Facilities: Good No Interchange Signal on Douglas Traffic on Douglas Remains Free-Flow Weaving on Douglas and CD Roads Remains
Interchange Geometry	<ul style="list-style-type: none"> Ramp Design Speed 50 mph All Weaving Eliminated Flat Dual Left-Turn Curves Allow for Ease of Movement Between Ramps and Douglas 	<ul style="list-style-type: none"> Ramp Design Speed 35-50 mph All Weaving Eliminated Dual Left-Turns Between Ramps and Douglas Will Be at Slow Speed Due to Ramp Intersection Angles 	<ul style="list-style-type: none"> Ramp Design Speed 20 mph Loops and Weaving on Douglas and CD Roads Remain CD Roads Reconstructed 2 Lanes Wide in Ramp Merge Areas
Environmental Impacts²	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts	Minimal Wetland and Stream Impacts
Utility Relocations	7 Utilities Impacted	7 Utilities Impacted	7 Utilities Impacted
Right-of-Way Impacts	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County	Approx. 0.74 Acres S.W. Quadrant—Oklahoma County
Total Project Cost	\$47 million	\$56 million	\$45 million

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Notes:

- 1: By 2045, the Douglas & 29th Street intersection will need additional lanes to ensure proper interchange operations. In addition, eastbound to northbound pm traffic will need an additional route alternative to ensure proper interchange operations.
- 2: No other environmental constraints identified.



APPENDIX G
AGENCY RESPONSE LETTERS



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SOUTHERN PLAINS REGION
BRANCH OF NATURAL RESOURCES
P.O. BOX 368
ANADARKO, OKLAHOMA 73005

IN REPLY REFER TO:
NATURAL RESOURCES (405) 247-6873

FEB 28 2017

Oklahoma Department of Transportation
Siv Sundaram, P.E.
Environmental Programs Division
200 NE 21st Street
Oklahoma City, OK 73105-3204

Dear Mr. Sundaram:

Thank you for the opportunity to comment on the proposed improvements to the I-40/Douglas Boulevard Bridge and interchange in Oklahoma County, Oklahoma (Project Number J2-8992[004]). A review of maps of the Bureau of Indian Affairs (BIA), Southern Plains Region, indicates that there are no tribal or Individual Indian trust lands in the vicinity of the proposed improvement area. The Southern Plains Region has no concerns that the proposed project will impact Indian trust lands within the Southern Plains Region's jurisdiction.

If any additional information is required, please contact David Anderson, Regional Environmental Scientist at 405-247-1532.

Sincerely,

ACTING

Regional Director



From: Tim Vermillion
To: [Diane Abernathy](#)
Subject: FW: Solicitation for I-40 and Douglas Blvd Bridge and Interchange Improvement in Oklahoma County, Oklahoma Job Piece Number 28992(04) Project Number J2-8992(004)
Date: Wednesday, January 18, 2017 7:16:23 AM

From: david_hurd@nps.gov [mailto:david_hurd@nps.gov] **On Behalf Of** IMRextrev, NPS
Sent: Tuesday, January 17, 2017 5:43 PM
To: Tim Vermillion
Subject: Re: Solicitation for I-40 and Douglas Blvd Bridge and Interchange Improvement in Oklahoma County, Oklahoma Job Piece Number 28992(04) Project Number J2-8992(004)

Dear Mr. Vermillion,

The National Park Service (NPS) would like to thank you for the opportunity to be involved in your project. The NPS has reviewed this project and has found no comments at this time.

Regards,

National Park Service
Intermountain Region External Review Team
Serving MT, UT, WY, CO, AZ, NM, OK, TX
imrextrev@nps.gov

On Thu, Dec 22, 2016 at 3:09 PM, Tim Vermillion <TVERMILLION@odot.org> wrote:
Ms. Sue E. Masica,

Please see attached pdf letter.

Tim Vermillion
Environmental Project Manager
Division 4
Oklahoma Department of Transportation
405-521-2676

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
Oklahoma City Service Center
4850 N Lincoln Blvd, Ste B
Oklahoma City, OK 73105
Telephone (405) 521-1332 ext. 3

Subject: Environmental Impact Study

Date: 1/03/2017

To: Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, OK 73105-3204
Room No. 3-D2a

Upon reviewing your study, I foresee no problems with any of the environmental factors mentioned within your proposal. If any new construction or other disturbances outside of your proposal occur and needs to be address please let us know. No other considerations or permits need to be addressed from our agency.

Thank you for your environmental concern.



Christopher Best
District Conservationist
USDA-NRCS
Oklahoma Field Office

1-18-17
1-40 & Douglas
Blvd. Bridge &
Interchange Agreement
Josh - NRCS OKC



Rob't



OKLAHOMA AERONAUTICS COMMISSION

January 10, 2017

Siv Sundaram, P.E.
Environmental Programs Division Engineer
Oklahoma Department of Transportation
200 Northeast 21st Street
Oklahoma City, OK 73105-3204

Re: Solicitation for I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(004)
Potential Hazard

Dear Ms. Sundaram,

This is in reference to your December 22, 2016 letter concerning the changes to the I-40 and Douglas Boulevard Bridge and Interchange in Oklahoma County. The Commission would like to draw your attention to the CFR Title 14 Part 77.13, which states that any person/organization who intends to sponsor any of the following construction or alterations must notify the Administrator of the FAA:

- any construction or alteration exceeding 200 ft above ground level
- any construction or alteration:
 - within 20,000 ft of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 ft
 - within 10,000 ft of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 ft
 - within 5,000 ft of a public use heliport which exceeds a 25:1 surface
- any highway, railroad or other traverse way whose prescribed adjusted height would exceed the above noted standards
- when requested by the FAA
- any construction or alteration located on a public use airport or heliport regardless of height or location



Based on the limited information provided in your letter and our cursory review, it appears that the proposed changes **may pose a hazard to the safe and efficient use of navigable airspace**. Due to the proximity of Tinker Air Force Base to Douglas Boulevard, changes to this road may create an obstruction to aircraft approaching the runway. Because of this, the Commission recommends that you use FAA's notice criteria tool (at the web address given below) to determine if a 7460-1 form needs to be filed with the FAA.

<https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>

If a 7460-1 form is required for any permanent structure with this project, including the roadway, please inform the Commission as soon as possible. You will likely be required to file a permit application, under the rules of the Aircraft Pilot and Passenger Protection Act, with the Commission. Should you have any questions in the matter, please do not hesitate to contact me at ctaber@oac.ok.gov or (405) 604-6910.

Sincerely,



Catherine Taber
Aviation Program Manager
Oklahoma Aeronautics Commission

MARY FALLIN
GOVERNOR

TODD LAMB
LIEUTENANT GOVERNOR



Our Land • Our Heritage • Our Future

TREY LAM
EXECUTIVE DIRECTOR

LISA KNAUF OWEN
ASSISTANT DIRECTOR

February 6, 2017

Siv Sundaram
Environmental Programs Division Engineer
Oklahoma Dept. of Transportation
200 NE 21st St.
Oklahoma City, OK 73105

RE: Solicitation for I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(004)

Dear Ms. Sundaram:

Thank you for the opportunity to review and comment on the three alternatives for this ODOT project as described in your letter of December 22, 2016. The Oklahoma Conservation Commission does not have specific comments on any of the three alternatives. Each alternative appears to cross Soldier Creek near the eastern project boundary. In addition to general concerns about the impact of construction activities on Soldier Creek, although it appears to be low, there is the potential for impact on wetland resources and riparian areas but the potential impact appears to be similar for all alternatives. No other specific wetland or waterbody resource concerns were observed.

The Oklahoma Conservation Commission (OCC) has general concerns that should be addressed throughout this project. One concern is that riparian areas will be disturbed and siltation problems could arise during this process. OCC is also concerned about mechanical disturbance in the stream itself, whether it is simply for construction or that it involve the redirecting or "redesigning" of the channel. Additionally, OCC is concerned that the cross-sectional area may be reduced and not allow for needed drainage. OCC recommends plans that reduce disturbance, and thus siltation, in the creeks and erosion control plans sufficient to minimize sedimentation impacts from construction activities outside the stream channel. OCC also recommends minimizing changes in the stream configuration (slope, width, depth and path) or if the streams must be manipulated, natural designs be used to reshape and stabilize the stream. This natural stabilization method is considerably more economical and beneficial to the environment than historical stabilization techniques. Restoring riparian corridors using natural design ultimately produces stream systems that are more stable and efficient in transporting bed load and flood flows while providing habitat for riparian/wetland wildlife. If this method cannot be used, OCC recommends that permanently protected riparian mitigation be implemented possibly through a conservation easement. Tying to this recommendation, OCC suggests that if bridge crossings are modified, sufficient cross-sectional drainage area through the bridge crossings be incorporated in the plan to allow for maximum periodic flood drainage. Many older bridge designs do not account for all expected flood drainage and the bridge functions as a dam, constricting flow, creating stress on banks and structures, and effectively reducing the natural positive effects of the flood plain. OCC requests that following completion of this project, the streams remain free flowing (stream slope unaffected by construction) with naturally vegetated stable banks and with stream substrate free of excess sedimentation from project activities.

If you have any further questions or concerns, please contact me at 405/522-6908 or at brooks.tramell@conservation.ok.gov.

Sincerely,



Brooks Tramell
Director of Monitoring, Assessment, and Wetlands Programs
Water Quality Division

cc: Wetlands file
Shanon Phillips, OCC Water Quality Division Director



From: Brad Ice
To: [Diane Abernathy; tvermillion@odot.org](mailto:tvermillion@odot.org)
Subject: JP 28992(04), Project No.:J2-8992(04)
Date: Monday, January 09, 2017 12:47:22 PM

Diane and Tim,

RE: Solicitation for I-40 and Douglas Boulevard Bridge and Interchange Improvement in Oklahoma City, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(04).

I have found no records of any oil and gas wells located in 14-11N-02W or 13-11N-02W Oklahoma Co. for the project listed above.

If you have any questions please contact me.

Thanks

Brad Ice
District Manager
Distr. 2
OCC
Off. 405-375-5570
b.ice@occemail.com

January 3, 2017

SENT VIA EMAIL TO: Odot-environment@odot.org

Environmental Programs Division Engineer
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105

Re: 1-40 and Douglas Boulevard Bridge and Interchange, State Job Piece JP 28992(04)

To Whom It May Concern,

Due to anticipated continued growth and expansion of the mission of Tinker Air Force Base, the Oklahoma Department of Commerce supports the alternative that supports the most traffic volume including semi-trucks and trailers. Tinker Air Force Base is projecting continued growth along the east side of Douglas Boulevard between Interstate 40 and Interstate 240.

The United States Air Force is constructing new maintenance and hanger facilities in the area east of Air Depot Boulevard and north of Interstate 240. This is to support Tinker Air Force base's role as the maintenance center for the new KC-46A Pegasus tanker that may impact traffic in the area of the above project.

The impact of the construction of the new "Eastern Oklahoma County" turnpike needs to be factored in the decision to be made by the Oklahoma Department of Transportation. It may be necessary to review the interchanges at Douglas Boulevard and Air Depot Boulevard with Interstate 240 for needed maintenance before construction is commenced on the Interstate 40 and Douglas Boulevard interchange to accommodate diverted commercial traffic.

If you have any questions, please contact the undersigned at your convenience.

Sincerely,



Donald R. Hackler, Jr.
Deputy Director/General Counsel

From: Roberts, Jon
To: odot-environment@odot.org; [Diane Abernathy](mailto:Diane.Abernathy@odot.org); ["tvermillion@odot.org"](mailto:tvermillion@odot.org)
Subject: Environmental Review
Date: Thursday, January 12, 2017 9:33:35 AM
Attachments: [FactSheet-GeneralConstructionProjects.pdf](#)

Dear Ms. Sundaram:

In response to your request, we have completed an environmental review of air, land and water records for the project listed below. Attached is a list of environmental recommendations that you should consider as you complete your project.

Project

Letter dated December 22, 2016 – I-40 & Douglass Blvd. Bridge Improvements, Oklahoma County, OK, Job Piece: JP28992(04), Project No: J2-8992(004)

Comments

Prior to beginning any construction activity disturbing more than one acre, you must submit an NOI and obtain authorization under OKR10, construction stormwater.

DEQ highly recommends ODOT contact TAFB ERB for details on monitor wells and potential interaction with the perched aquifer in in the area.

Contact:

Mr. Albert Aguilar, Chief
Environmental Restoration Branch
72 ABW/CEPR
7701 Arnold St., Ste. 221
Tinker AFB, OK
73145-9100

(405) 734-4574
Fax: (405) 734-4210

albert.aguilar@us.af.mil

If you have any questions or need clarification, please contact me.

Regards,

Jon A. Roberts, Senior Manager
Office of External Affairs
Oklahoma Department of Environmental Quality
P. O. Box 1677
707 N. Robinson Ave.
Oklahoma City, OK 73101-1677
Ph: (405) 702-7111; Fax: (405) 702-7101
<http://www.deq.state.ok.us/OEA/index.html>

AIR, LAND & WATER

Recommendations for General Construction/Improvement Projects

During the environmental review process for general construction/improvement projects, the following recommendations are offered to assist in ensuring environmental compliance throughout the project.

- Any project which includes the removal or installation of water and/or sewer lines shall conform to all relevant local and/or state plumbing codes.
- Any project which includes the removal of paint shall conform to all relevant lead-based paint regulations.
- Any project which includes the handling and/or removal of asbestos shall conform to all relevant asbestos regulations.
- During any construction, demolition, and/or rehabilitation reasonable precautions should be taken to protect air quality by minimizing fugitive dust emissions.
- If construction, demolition, and/or rehabilitation will disturb more than one acre of land, a determination should be made as to whether an Oklahoma Pollutant Discharge Elimination System (OPDES) permit for storm water is required during the construction phase.
- Any solid or hazardous waste from the site shall be recycled and/or disposed of in accordance with all relevant solid waste and/or RCRA regulations.



From: Eve Atkinson
To: [Diane Abernathy](#)
Cc: [Susan Henry](#)
Subject: Oklahoma county: I-40 and Douglas Boulevard Bridge and interchange Improvement
Date: Monday, January 09, 2017 4:54:50 PM

Dear Diane,

The proposed alternatives will have no adverse impact on any federally funded park or recreation area or state park

Eve L. Atkinson, Planner II
Oklahoma State Parks
Oklahoma Tourism and Recreation Department
900 North Stiles, Suite 200
Oklahoma City, OK 73104-3234

405.522.9516.
Eve.Atkinson@travelok.com



STATE OF OKLAHOMA
WATER RESOURCES BOARD

www.owrb.ok.gov

OKLAHOMA WATER RESOURCES BOARD

Planning & Management Division
Oklahoma City, OK

PUBLIC NOTICE REVIEW

We have no comments to offer. We offer the following comments.

WE RECOMMEND THAT YOU CONTACT THE LOCAL FLOODPLAIN ADMINISTRATOR FOR POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. THE OWRB WEB SITE, www.owrb.ok.gov, contains a directory of floodplain administrators and is located under forms/floodplain management/floodplain administrators, listed alphabetically by name of community. **If this development would fall on STATE OWNED or operated property, a floodplain development permit is required from OWRB.** The Chapter 55 Rules and permit application for this requirement can be found on the OWRB web site listed above. If this project is proposed in a non-participating community, try to ensure that this project is completed so that it is reasonably safe from flooding and so that it does not flood adjacent property if at all possible.

Reviewer: Cathy Poage, CFM Date: 01/12/2017

Project Name: Proposed Bridge & Roadway Improvements JP #28992(04), Project #J2-8992(004), Located at I-40 and Douglas Blvd, in Oklahoma County, OK

FIRM Name: ODOT, Siv Sundaram, P.E., Environmental Prog. Div. Engineer
CC: Erik Brandt CFM, FPA Oklahoma County

* Oklahoma County participates in the NFIP and has a floodplain development permitting system. Please see above paragraph.



STATE OF OKLAHOMA
WATER RESOURCES BOARD
www.owrb.ok.gov

OKLAHOMA WATER RESOURCES BOARD
Planning & Management Division
Oklahoma City, OK

PUBLIC NOTICE REVIEW

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Reviewer: Cathy L. Poage, CFM

DATE 06/9/2017

Project Name: Proposed Improvements to I-40 from Douglas Blvd to I-240 (4.8 Miles) JP 31011 (05) (06) (07), Located in Oklahoma County, OK

FIRM Name: ODOT, Siv Sundaram, P.E., Environmental Programs Division Eng. CC: Erik Brandt CFM, Oklahoma County FPA

* Oklahoma County participates in the NFIP and has a floodplain development permitting system. See paragraph above.

JULIE CUNNINGHAM
EXECUTIVE DIRECTOR



MARY FALLIN
GOVERNOR

**STATE OF OKLAHOMA
WATER RESOURCES BOARD**
www.owrb.ok.gov

OKLAHOMA WATER RESOURCES BOARD
Planning & Management Division
Oklahoma City, OK

PUBLIC NOTICE REVIEW

We have no comments to offer. We offer the following comments.

WE RECOMMEND THAT YOU CONTACT THE LOCAL FLOODPLAIN ADMINISTRATOR FOR POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. THE OWRB WEB SITE, www.owrb.ok.gov, contains a directory of floodplain administrators and is located under forms/floodplain management/floodplain administrators, listed alphabetically by name of community. **If this development would fall on state owned or operated property, a floodplain development permit is required from OWRB.** The Chapter 55 Rules and permit application for this requirement can be found on the OWRB web site listed above. If this project is proposed in a non-participating community, try to ensure that this project is completed so that it is reasonably safe from flooding and so that it does not flood adjacent property if at all possible.

JULIE CUNNINGHAM
EXECUTIVE DIRECTOR



MARY FALLIN
GOVERNOR

**STATE OF OKLAHOMA
WATER RESOURCES BOARD**

www.owrb.ok.gov

Reviewer: Cathy L. Poage, CFM

DATE 06/12/2017

Project Name: Proposed Improvement to I-40 & Douglas Blvd Bridge & Interchange
JP 28992(04), Located in Oklahoma County, OK

FIRM Name: ODOT, Siv Sundaram, PE, Environmental Programs Div. Eng.
CC: Eric Wenger, Oklahoma County FPA & Erik Brandt CFM, Oklahoma City FPA

* Oklahoma County and Oklahoma City both participate in the NFIP and have a floodplain development permitting system. See paragraph above.

APPENDIX H
PUBLIC RESPONSE LETTERS





COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

Thank you for your interest in this project and taking the time to provide us with your written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: Nicholas Ajimine		Business / Organization: Tinker AFB	
Address: 1970 Potter Ct.		City: Midwest City	State: OK
Phone Number: (580) 284-1638		Email Address: nicajimine@hotmail.com	
Zip Code: 73130			

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

I recommend Alternative 2 "Tight Urban Diamond Interchange (TUDI) with Flyover. I work on Tinker AFB and alternative 2 seems to best address the traffic leaving base and heading west with no interruption to traffic flow. Pedestrian walkability is also important and this one seems to accommodate pedestrians better than the others.

Second choice would be Alternative 1 (SPUI) but this option doesn't handle west bound traffic leaving Tinker as well as Alternative 2 (TUDI).

Least favorite option is Alternative 3. DO NOT redo the cloverleaf. Ramp loops are horrible with dramatic changes in speeds and lanes, and confusing/dangerous CD roads. These Interchanges are accidents waiting to happen. It's also not pedestrian friendly. Worst option of the 3 choices!

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:

ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:

Fax: (405) 522-5193

On the Web:

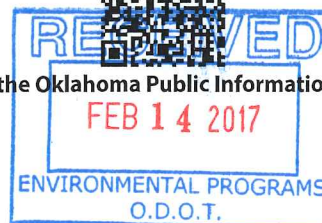
www.odot.org/publicmeetings

By Email:

odot-environment@odot.org



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COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

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PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: GEORGE BENARD		Business / Organization: ST Anthony Hospital	
Address: 3400 S. Douglas Blvd		City: Oklahoma	State: OK
Phone Number: 405-272-6701		Zip Code: 73150	
Email Address: GEORGE.BENARD@SSMHEALTH.com			

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

Alternative 1 SINGLE POINT URBAN Interchange (SPUI) appears to be the best choice for future traffic growth and safety.

Question: A yielding question related to entrance ramps from Douglas South bound and Douglas North bound entry I-40 westbound. who at this ramp yields to which lane please see map circled indicate specific location. The current design ~~seems~~ appears similar to new design which has motor vehicles accidents daily related to failure of yielding. Is it possible to add a signal light on the entrance ramp to stop traffic to avoid the yielding issue.

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:

ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:

Fax: (405) 522-5193

On the Web:

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By Email:

odot-environment@odot.org

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SE 29TH ST.

SEC. 13 T11N R2W

SOLDIER CREEK

I-40

DOUGLAS BLVD

SEC. 13 T11N R2W

SEC. 14 T11N R2W

Image courtesy of ImagePatch.com © 2017 Microsoft Corporation

LEGEND

	STUDY AREA EXTENTS		RESIDENTIAL PROPERTY
	PROPERTY BOUNDARY		COMMERCIAL PROPERTY
	R/W		USTILUST SITE
	PRES. R/W		HISTORICAL SERVICE STATION
	GAS LINE		POTENTIAL WATERWAY
	POWER LINE		FLOOD HAZARD AREA ZONE A
	UNDERGROUND POWER LINE		FUTURE PROJECT TO BE DETERMINED
	SANITARY SEWER		
	TELEPHONE UNDERGROUND LINE		
	FIBER OPTIC		
	WATER LINE		
	PROPOSED ROADWAY		
	PROPOSED BRIDGE		

**I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY**

DATE: 01-17-17
SCALE: AS SHOWN
DRWN BY: XXX



**ALTERNATIVE 1
SINGLE POINT URBAN INTERCHANGE (SPUI)**

J/P 28992(04)



COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

Thank you for your interest in this project and taking the time to provide us with your written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: Patrick Coleman		Business / Organization: N/A	
Address: 21320 SE 99TH Street		City: Newalla	State: OK
Phone Number: +1 (330) 402-3686		Email Address: Nautica7686@aol.com	

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

I choose Alternative plan 3. The I-40 / Douglas Blvd interchange is one of the best designed exits for the traffic it handles that I use in Oklahoma. Many of the interchanges in OKC feel very dangerous with short ramps, high speed exits or almost nonexistent merging lanes. I frequently use the Douglas Northbound Exit, approaching from either the West or East. It is never congested, it feels very safe entering and exiting from all directions and best of all there are no traffic signals. The current configuration always gets you on and off the highway quickly. I don't understand Alternative plan 2 at all. A2 is overly expensive, will add 2 unnecessary traffic signals and includes a flyover bridge that only benefits one direction of travel. I don't know who this flyover bridge is benefitting, but the south part of Douglas is not as busy as the North where all of the businesses are located. I also don't understand the thinking that speeding 50 mph off of an exit (Plans A1 and A2) to end up at a stoplight is helpful for anyone, especially at the additional expense. A3 is the best choice as it keeps the speeds down (SAFE) and eliminates stopping traffic with signals.

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:
Fax: (405) 522-5193

By Email:
odot-environment@odot.org

On the Web:
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I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

Thank you for your interest in this project and taking the time to provide us with your written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: <i>Charlie & Laurie Effinger</i>		Business / Organization:	
Address: <i>19250 Ranchwood</i>		City: <i>Narrah</i>	State: <i>OK</i>
Phone Number: <i>306-4213</i>		Zip Code: <i>73045</i>	
Email Address:			

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

Please don't build a new interchange that has "weave" merging. As traffic builds over the years it will become more & more hazardous. Either of the other two would be better - Alt. 1 or 2

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
 OKLAHOMA DEPARTMENT OF TRANSPORTATION
 200 N.E. 21ST ST.
 Oklahoma City, OK 73105-3204

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 Fax: (405) 522-5193

On the Web:
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By Email:
odot-environment@odot.org



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From: Tim Vermillion
To: [Diane Abernathy](mailto:Diane.Abernathy)
Subject: FW: I-40 / Dougas Bouvard Bridge Replacement
Date: Friday, February 10, 2017 11:32:00 AM

From: Daniel Nguyen
Sent: Wednesday, January 18, 2017 4:48 PM
To: Tim Vermillion
Subject: FW: I-40 / Dougas Bouvard Bridge Replacement

Please include in comments for the meeting.

From: GGoldschla@aol.com [<mailto:GGoldschla@aol.com>]
Sent: Wednesday, January 18, 2017 1:02 PM
To: Daniel Nguyen
Subject: I-40 / Dougas Bouvard Bridge Replacement

I like Alternative 1 the (SPU1) . But I drive a small truck and can use any of the configurations you presented . But what about big trucks . Whenever I see numbers for today and the future for this road or that , I never see a big truck count . (WHY ?) Trucks are tall so are far more likely to turn over in a turn, so large swiping turns are better for large trucks . Because of their weight they take longer to stop but more importantly they take longer to start . A cloverleaf may be OK for cars and small trucks but they are a nightmare for big trucks that don't have the ability to accelerate in short distances . For both of these reasons controlled intersections make more sense for big trucks . Additionally big trucks are harder on the roadway . If a project expects a lot of big trucks ,you might think of using a harder surface material or making the surface thicker as a way of extending the useable life of the roadway .

I see vehicle counters all over our state as a way to predict future projects it might be time to use electronic eyes mounted on poles above the height of small vehicles as a way of determining the number of trucks that will be using a given intersection . Having truck drivers ether as staff or consultants may also be a good way of designing roads for these big rigs .

Thank You for your very informative meeting last night and please don't forget to keep in mind my suggestion to put the part of your road in front of Tinker under ground .

Have a GREAT day

Glenn Goldschlager
1409 Everygreen Cr.
Midwest City Okla. 73110
405 737 8236
ggoldschla@aol.com



COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

Thank you for your interest in this project and taking the time to provide us with your written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: <i>Fred Hawk</i>		Business / Organization:	
Address: <i>1302 S. Caldwell DR.</i>		City: <i>MWC</i>	State: <i>OK</i>
Phone Number: <i>405-737-7052</i>		Zip Code: <i>73130</i>	
Email Address: <i>fjhawk@cox.net</i>			
<p>"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."</p> <p><i>I would go/vote for Alt 1 (.SP11) because of the flyover. Another bridge to take care of and winter weather problems it would bring. Thank you FH Hawk</i></p>			

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
 OKLAHOMA DEPARTMENT OF TRANSPORTATION
 200 N.E. 21ST ST.
 Oklahoma City, OK 73105-3204

By Fax:
 Fax: (405) 522-5193

On the Web:
www.odot.org/publicmeetings

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odot-environment@odot.org



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JP: 28992(04)

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Oklahoma County, OK

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PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: <i>Albert Mallette Jr.</i>		Business / Organization: <i>Bare Roots Homes, LLC</i>	
Address: <i>9489 Rhythm Road</i>		City: <i>Midwest</i>	State: <i>OK</i>
Phone Number: <i>(405) 288-7732</i>		Zip Code: <i>73138</i>	
		Email Address: <i>amallette95@gmail.com</i>	

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

For me, I would like to see alternative #1 and add a pedestrian walkway.

I am in favor of removing the clover leaf.

Comments on this project can be submitted in several ways, including but not limited to:

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PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

<i>Name:</i> Ellen Mallette		<i>Business / Organization:</i>	
<i>Address:</i> 512 E Lockheed Dr	<i>City:</i> Midwest City	<i>State:</i> OK	<i>Zip Code:</i> 73110
<i>Phone Number:</i> +1 (405) 517-3298		<i>Email Address:</i> ellymae73@gmail.com	

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

I appreciate that the meeting was for informing the public about the project and asking for feedback. I feel alternative 1 - SPUI would be the best option for this area. I have lived in the area for over 40 years and have experienced the traffic during rush hour. The traffic lights will be very helpful since people get in a hurry and do not want to let others merge into traffic. I do have a request that once the project is finished the lane lines be painted clearly, especially the turn lanes.

Again, thank you for allowing the public to put in an opinion. In the future please announce the meetings on the nightly news so that others will have more notice and can plan to attend.

Thank you,
Ellen Mallette
A concerned citizen

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:
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I-40/Douglas Project

Phone Call Record

12/1/16

David Neff, Owner of St. Anthony Healthplex, 405-659-3644

Issues:

1. Full Service ER, access must be maintained throughout construction
2. Would like opportunity to review/comment on designs under consideration
3. Existing traffic hazard: EB I-40 traffic destined to the Healthplex exits I-40 and merges onto SB Douglas, then makes a left-turn into the Healthplex. SB Douglas traffic comes over the bridge at a high speed, and encounters the left-turning traffic, resulting in numerous accidents.

Notes:

I thanked Mr. Neff for his input, assured him his comment would be noted, explained he would be invited to a January 2017 public meeting to review the design options, and assured him his traffic hazard concern would be forwarded to the designers. I encouraged him to also submit written comments, which he agreed he would do.



COMMENT FORM

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I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

Thank you for your interest in this project and taking the time to provide us with your written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

<i>Name:</i> Steve Reynolds		<i>Business / Organization:</i>	
<i>Address:</i> 11644 Zandra Ave	<i>City:</i> Midwest City	<i>State:</i> OK	<i>Zip Code:</i> 73130
<i>Phone Number:</i> +1 (405) 769-5870		<i>Email Address:</i> screynold@aol.com	

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

Alternative 1 or 2 are acceptable in relieving weaving on Douglas and the C/D roads.

Could the SE29th/Douglas intersection be improved as part of this? A second left turn lane was added several years ago without widening. The resulting lanes are too narrow, especially the inner left turn lanes. You are often squeezed when a long vehicle makes a left from the outer left turn lane.

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:

ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:

Fax: (405) 522-5193

On the Web:

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By Email:

odot-environment@odot.org

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From: Siv Sundaram
To: [Tim Vermillion](#); [Diane Abernathy](#); [Daniel Nguyen](#); [Brian Taylor](#)
Subject: FW: I-40/Douglas Interchange
Date: Monday, January 23, 2017 4:19:43 PM

From: Campbell Sadeghy [mailto:plutonicpanda@gmail.com]
Sent: Wednesday, January 18, 2017 6:33 PM
To: ODOTWeb-environment
Subject: I-40/Douglas Interchange

I think alternative 2 seems like the best bet for moving traffic more efficiently.



COMMENT FORM

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I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

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PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: DAVID SAULSBERRY		Business / Organization:	
Address: 2326 BERRY LANE		City: MIDWEST CITY	State: OK
		Zip Code: 73130	
Phone Number: 405-821-2249		Email Address: DAVIDSAULSBERRY75@GMAIL.COM	
<p>"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."</p> <p>I PREFER ALT. NO. 1 OR 2. I USE THIS INTERCHANGE EVERYDAY AND THE CLOVERLEAF CONFIGURATION WITH THE CD ROADS DOES NOT WORK WELL. I WOULD LIKE TO HAVE AN INTERCHANGE THAT IS PEDESTRIAN FRIENDLY.</p> <p>IF I HAD A CHOICE I WOULD PICK ALT. NO. 1. I BELIEVE IT IS THE BEST SOLUTION TO IMPROVING SAFETY WHILE ACCOMMODATING FUTURE TRAFFIC, VEHICLE AND PEDESTRIAN.</p>			

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
 OKLAHOMA DEPARTMENT OF TRANSPORTATION
 200 N.E. 21ST ST.
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I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction

JP: 28992(04)

01/17/2017

Oklahoma County, OK

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PLEASE SUBMIT YOUR COMMENTS BY: 02/14/2017

Name: Jeffrey Witte		Business / Organization:	
Address: 9916 Railroad		City: Midwest City	State: OK
Phone Number: 480-326-5719		Email Address: jeff.witte82@gmail.com	
Zip Code: 73130			

"I have the following comment(s) and/or question(s) about the proposed project to improve the I-40/Douglas Blvd. Interchange, in Oklahoma County, OK."

Living nearby I use this interchange on a daily basis. The biggest problem I encounter is using the ramp from eastbound I-40 to northbound Douglas Blvd. Many times during the day, and especially during rush hour, traffic on northbound Douglas will back up onto the bridge in the right lane. There is a lot of traffic that turns right onto eastbound SE 29th St to get to neighborhoods along Post Rd and Westminster Rd. This area is also growing and without access to I-40 from Post Rd and Westminster Rd, traffic will just increase on Douglas Blvd. If you're going to build Douglas Blvd as a 6 lane road over I-40, with whichever alternative is selected, please consider continuing the right lane of northbound Douglas Rd and make it a right turn only lane at SE 29 St. This will prevent backups onto the bridge and will help traffic move more smoothly, especially if the right turn is signaled so people do not have to stop when traffic is turning from westbound SE 29th St to southbound Douglas Blvd.

Thank you.

Jeffrey Witte
A concerned citizen

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
ENVIRONMENTAL PROGRAMS DIVISION
OKLAHOMA DEPARTMENT OF TRANSPORTATION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:
Fax: (405) 522-5193

By Email:
odot-environment@odot.org

On the Web:
www.odot.org/publicmeetings



Please be aware that all information that you submit on this form is subject to public disclosure under the Oklahoma Public Information Act.

Reset Form	Print Form	Submit by Email
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April 11, 2017

Mr. John Ledbetter
Realty Specialist – Oklahoma Field Office
Bureau of Land Management
201 Stephenson parkway, Suite 1200
Norman, OK 73072-2037

**Subject: I-40 and Douglas Boulevard Bridge and Interchange Improvement, Oklahoma County, Oklahoma,
State Job Piece: JP 28992(04), Project No.: J2-8992(004)**

Dear Mr. Ledbetter:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma. A Public Meeting was held to present the project information on January 17, 2017, in the Raider Room of the Bill Atkinson Student Center at Rose State College, Midwest City, Oklahoma. At that meeting, three alternatives were presented, based on the results of an engineering design study. These alternatives were:

- Alternative 1 – Single Point Urban Interchange (SPUI)
- Alternative 2 – Tight Urban Diamond Interchange (TUDI) with Future Flyover Ramp
- Alternative 3 – Cloverleaf Interchange

ODOT received comments from the public, as well as state and federal agencies. More than half of the written public comments received which expressed support for an alternative supported Alternative 1. Alternative 2 received the next most support. Other public comments addressed traffic operations at the nearby S.E. 29th Street/Douglas Boulevard intersection, pedestrian accommodations, and other miscellaneous issues. Based on these comments and the completed engineering design study, ODOT has selected Alternative 1 as the Preferred Alternative (see enclosed graphic). Alternative 1 improves safety, accommodates large volumes of traffic, and provides greater mobility for both cars and large trucks due to long, gradual turns. Alternative 2 was eliminated due to higher construction costs and less efficient traffic operations and turning traffic mobility. Alternative 3 was eliminated due to less than desirable interchange geometry, fewer safety improvements, and difficulty in providing pedestrian facilities.

For more information about this project, including ODOT responses to public comments, please visit ODOT's webpage: https://www.ok.gov/odot/Programs_and_Projects/Public_Meetings_and_Hearings/20170117.html

ODOT will move forward with preliminary design and environmental studies for Alternative 1. Currently, ODOT has this project scheduled for right-of-way and utility relocation in 2017 with projected construction in 2020.

Should you have any questions or specific concerns, please contact our authorized agent, Diane Abernathy with Triad Design Group at (405) 919-0481 or dabernathy@triaddesigngroup.com. As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/Triad

Enclosures: Preferred Alternative Graphic, Location Map

Mr. John Ledbetter
Realty Specialist - Oklahoma Field Office
Bureau of Land Management
201 Stephenson Parkway, Suite 1200
Norman, Oklahoma 73019

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Division Administrator
Federal Highway Administration
5801 N. Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73118

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Regional Director
Health & Human Services Region 6
1301 Young Street, Ste.124
Dallas, Texas 75202

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Regulatory Branch Chief
Tulsa District Corps of Engineers
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Tulsa, Oklahoma 74128-4629

Colonel Christopher A. Husin
District Engineer
Tulsa District Corps of Engineers
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Planning & Environmental (PER) Division
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Mr. David Blackmore
Engineering Branch, Infrastructure Section
Tulsa District Corps of Engineers
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Tulsa, Oklahoma 74128-4629

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Regional Director, Eastern Oklahoma Region
Bureau of Indian Affairs
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District Conservationist
Natural Resources Conservation Service
4850 N. Lincoln Blvd.
Oklahoma City, Oklahoma 73116

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Tulsa Field Office Director
U.S. Housing & Urban Development
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Regional Director - Intermountain Region Office,
Planning & Environmental Quality
National Park Service
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Denver, Colorado 80225

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Regional Environmental Officer
U.S. Department of the Interior
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Albuquerque, New Mexico 87104

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Director
Oklahoma Aeronautics Commission
120 N. Robinson, Suite 1244W
Oklahoma City, Oklahoma 73102

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Director - Oil & Gas Division
Oklahoma Corporation Commission
Jim Thorpe Building, 2101 N. Lincoln Blvd.
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Environmental Review Coordinator
DEQ Customer Assistance Program
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

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Oklahoma City, Oklahoma 73105-7917

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Secretary of Commerce and Tourism,
Executive Director of Commerce
Oklahoma Department of Commerce
900 North Stiles
Oklahoma City, Oklahoma 73104

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Director
Department of Wildlife Conservation
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Oklahoma City, Oklahoma 73152

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Commissioner of Agriculture
Department of Agriculture
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Oklahoma City, Oklahoma 73105-4298

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Interim Executive Director
Oklahoma Water Resources Board
3800 North Classen
Oklahoma City, Oklahoma 73118

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Director
Oklahoma Geological Survey
100 East Boyd, Room N-131
Norman, Oklahoma 73019-0628

Dr. Kary Stackelbeck
Oklahoma State Archeologist
111 East Chesapeake, Building 134
Norman, Oklahoma 73019-5111

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State Superintendent
State Department of Education
2500 North Lincoln Blvd., Rm. 121
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Director, State Parks
Oklahoma Tourism & Recreation Department
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Oklahoma City, Oklahoma 73104

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Citizen Pottawatomie Nation
1601 S. Gordon Cooper Drive
Shawnee, Oklahoma 74801

Chairman Bobby Walkup
Iowa Tribe Of Oklahoma
Rte 1, Box 721
Perkins, Oklahoma 74059

Chairperson David Pacheco, Jr.
Kickapoo Tribe Of Oklahoma
P.O. Box 70
McLoud, Oklahoma 74851

Principal Chief Geoffrey Standing Bear
Osage Nation
627 Grandview
Pawhuska, Oklahoma 74056

President Terri Parton
Wichita And Affiliated Tribes
P.O. Box 729
Anadarko, Oklahoma 73005

Mr. John Johnson
Executive Director
Association of Central Oklahoma Governments
21 E. Main Street, Suite 100
Oklahoma City, OK 73104-2405

Mr. Greg Love
Commissioner District IV
Oklahoma Transportation Commission
10601 N. Pennsylvania Avenue
Oklahoma City, OK 73120

April 11, 2017

Mr. Cody Inman
Office of the Governor
2300 N. Lincoln Blvd., Ste. 212
Oklahoma City, OK 73105

Subject: I-40 and Douglas Boulevard Bridge and Interchange Improvement, Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(004)

Dear Mr. Inman:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma. A Public Meeting was held to present the project information on January 17, 2017, in the Raider Room of the Bill Atkinson Student Center at Rose State College, Midwest City, Oklahoma. At that meeting, three alternatives were presented, based on the results of an engineering design study. These alternatives were:

- Alternative 1 – Single Point Urban Interchange (SPUI)
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ODOT received comments from the public, as well as state and federal agencies. More than half of the written public comments received which expressed support for an alternative supported Alternative 1. Alternative 2 received the next most support. Other public comments addressed traffic operations at the nearby S.E. 29th Street/Douglas Boulevard intersection, pedestrian accommodations, and other miscellaneous issues. Based on these comments and the completed engineering design study, ODOT has selected Alternative 1 as the Preferred Alternative (see enclosed graphic). Alternative 1 improves safety, accommodates large volumes of traffic, and provides greater mobility for both cars and large trucks due to long, gradual turns. Alternative 2 was eliminated due to higher construction costs and less efficient traffic operations and turning traffic mobility. Alternative 3 was eliminated due to less than desirable interchange geometry, fewer safety improvements, and difficulty in providing pedestrian facilities.

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Should you have any questions or specific concerns, please contact our authorized agent, Diane Abernathy with Triad Design Group at (405) 919-0481 or dabernathy@triaddesigngroup.com. As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/Triad

Enclosures: Preferred Alternative Graphic, Location Map

Mr. Basharat Siddiqi
Division Administrator
Federal Highway Administration (FHWA)
5801 N Broadway Extension, Suite 300
Oklahoma City, Oklahoma 73118

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District IV
Oklahoma Transportation Commissioner
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Oklahoma State Archeologist
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Governments
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Mr. Cody Inman
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Board of County Commissioners
Oklahoma County
320 Robert S. Kerr Ave.
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The Honorable Matt Dukes
Mayor
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. J. Guy Henson
Midwest City, City Manager
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Daniel McClure, Jr.
Midwest City, Ward 1
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Pat Byrne
Midwest City, Ward 2
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Rick Dawkins
Midwest City, Ward 3
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Sean Reed
Midwest City, Ward 4
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Christine Allen
Midwest City, Ward 5
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

Mr. Jeff Moore
Midwest City, Ward 6
City of Midwest City
100 N Midwest Boulevard
Midwest City, OK 73110

The Honorable Mick Cornett
Mayor
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. James D. Couch
Oklahoma City, City Manager
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. James Greiner
Oklahoma City, Ward 1
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Ed Shadid
Oklahoma City, Ward 2
City of Oklahoma City
200 N Walker Ave.
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Mr. Larry McAtee
Oklahoma City, Ward 3
City of Oklahoma City
200 N Walker Ave.
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Mr. Pete White
Oklahoma City, Ward 4
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. David Greenwell
Oklahoma City, Ward 5
City of Oklahoma City
200 N Walker Ave.
Oklahoma City, OK 73102

Mr. Meg Salyer
Oklahoma City, Ward 6
City of Oklahoma City
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Mr. John A. Pettis, Jr.
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City of Oklahoma City
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Mr. Mark K. Stonecipher
Oklahoma City, Ward 8
City of Oklahoma City
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Oklahoma House of Representatives
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Midwest City, OK 73130

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1909 Overland Trail
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The Honorable Tom Cole
U.S. House of Representatives
2467 Rayburn House Office Building
Washington, DC 20515

The Honorable Steve Russell
U.S. House of Representatives
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Washington, DC 20515

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Oklahoma City, OK 73118

The Honorable James Inhofe
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Washington, DC 20510

The Honorable James Lankford
U.S. Senate
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Oklahoma City, OK 73102

The Honorable James Lankford
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Washington, DC 20510

Ms. Aurora Lora
Superintendent
Oklahoma City Public Schools
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Dr. Rick Cobb, Ph.D.
Mid-Del School District
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Midwest City, OK 73110

Rose State College
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Midwest City, OK 73110

Chief Bert Norton
Midwest City Fire Department
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Midwest City, OK 73110

Chief Brandon Clabes
Midwest City Police Department
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Midwest City, OK 73110

Administrator
AllianceHealth Midwest
2825 Parklawn Drive
Midwest City, OK 73110

Administrator
St. Anthony Healthplex East
3400 S Douglas Blvd
Oklahoma City, OK 73150

Mr. Brad Beam
Tinker Air Force Base
72 ABW/CE
Attn. Beam 7535 5th Street, Building 400
Tinker AFB, OK 73145

Mr. Michael Daly
Tinker Air Force Base
72 ABW/CE
Attn. Daly 7535 5th Street, Building 400
Tinker AFB, OK 73145

Colonel Stephanie Wilson
Tinker Air Force Base
72 ABW/CC
7460 Arnold St., Suite 234
Tinker AFB, OK 73145

April 11, 2017

Subject: I-40 and Douglas Boulevard Bridge and Interchange Improvement, Oklahoma County, Oklahoma, State Job Piece: JP 28992(04), Project No.: J2-8992(004)

Dear Property Owner/Utility Company/Stakeholder:

The Oklahoma Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, Oklahoma County, Oklahoma. A Public Meeting was held to present the project information on January 17, 2017, in the Raider Room of the Bill Atkinson Student Center at Rose State College, Midwest City, Oklahoma. At that meeting, three alternatives were presented, based on the results of an engineering design study. These alternatives were:

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Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/Triad

Enclosures: Preferred Alternative Graphic, Location Map

Mr. George Benard
St. Anthony Hospital
3400 S. Douglas Blvd
Oklahoma City, OK 73150

Mr. Patrick Coleman
21320 SE 99th Street
Newalla, OK 74857

Mr. & Mrs. Charlie Effinger
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Harrah, OK 73045

Mr. Glenn Goldschlager
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Midwest City, OK 73110

Mr. Fred Hawk
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Midwest City, OK 73130

Mr. Albert Mallette, Jr.
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Campbell Sadeghy
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Mr. Jeffrey Witte
9916 Railroad
Midwest City, OK 73130

Mr. & Mrs. Russell Boothe
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Oklahoma City, OK 73150

Ms. Lindsey Johnson
Kusum Hospitality
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Mr. Jeffrey James
3000 United Founders Blvd, Suite 119
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Mr. Jimmy Durant
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Oklahoma City, OK 73150

Mr. Kyle Nondorf
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Oklahoma City, OK 73150

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Midwest City, OK 73110

Mr. Billy Harless
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Tinker AFB, OK 0

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Oklahoma City, OK

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Ms. Jean Kay
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Newalla, OK 74857

Mr. Craig Mussatto
Tony's Tree Plantation
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Mr. Gary Polard
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Ms. Liz MacBeen
110 Hudson Place
Midwest City, OK 73110

Mr. Jeffrey Harrison
EMAIL

NEWY FAMILY PARTNERS
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MIDWEST CITY, OK 73140-5471

TWODSVENTURE1, LLC
252 NW 70TH ST
OKLAHOMA CITY, OK 73116-7807

N R FARD INC
405 WALTHAM ST #189
LEXINGTON, MA 02421-7934

STANLEY, INC
6508 S COUNTRY CLUB DRIVE
OKLAHOMA CITY, OK 73159-2942

AMPLE STORAGE LLC
4117 S POST RD
OKLAHOMA CITY, OK 73150

VIERSEN OIL & GAS CO
PO BOX 702708
TULSA, OK 74170-2708

PINKERTON, SUE CARMEL
1701 E FAIRLAWN
CUSHING, OK 74023-5755

MIDWEST CITY MEMORIAL HOSPITAL
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4319

CITY OF MIDWEST CITY
ATTENTION: COUNTY CLERK
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4327

JOHNSON, DONNIE B & JOANN
14050 HUMMINGBIRD DRIVE
CHOCTAW, OK 73020-7018

GRIFFIN PROPERTIES OKC LLC
MCDONALDS CORP
PO BOX 182571
COLUMBUS, OH 43218

LEX LLC
PO BOX 10537
MIDWEST CITY, OK 73140-1537

GRIFFIN PROPERTIES OKC, LLC
3025 GRIFFIN CENTER
OKLAHOMA CITY, OK 73150-1000

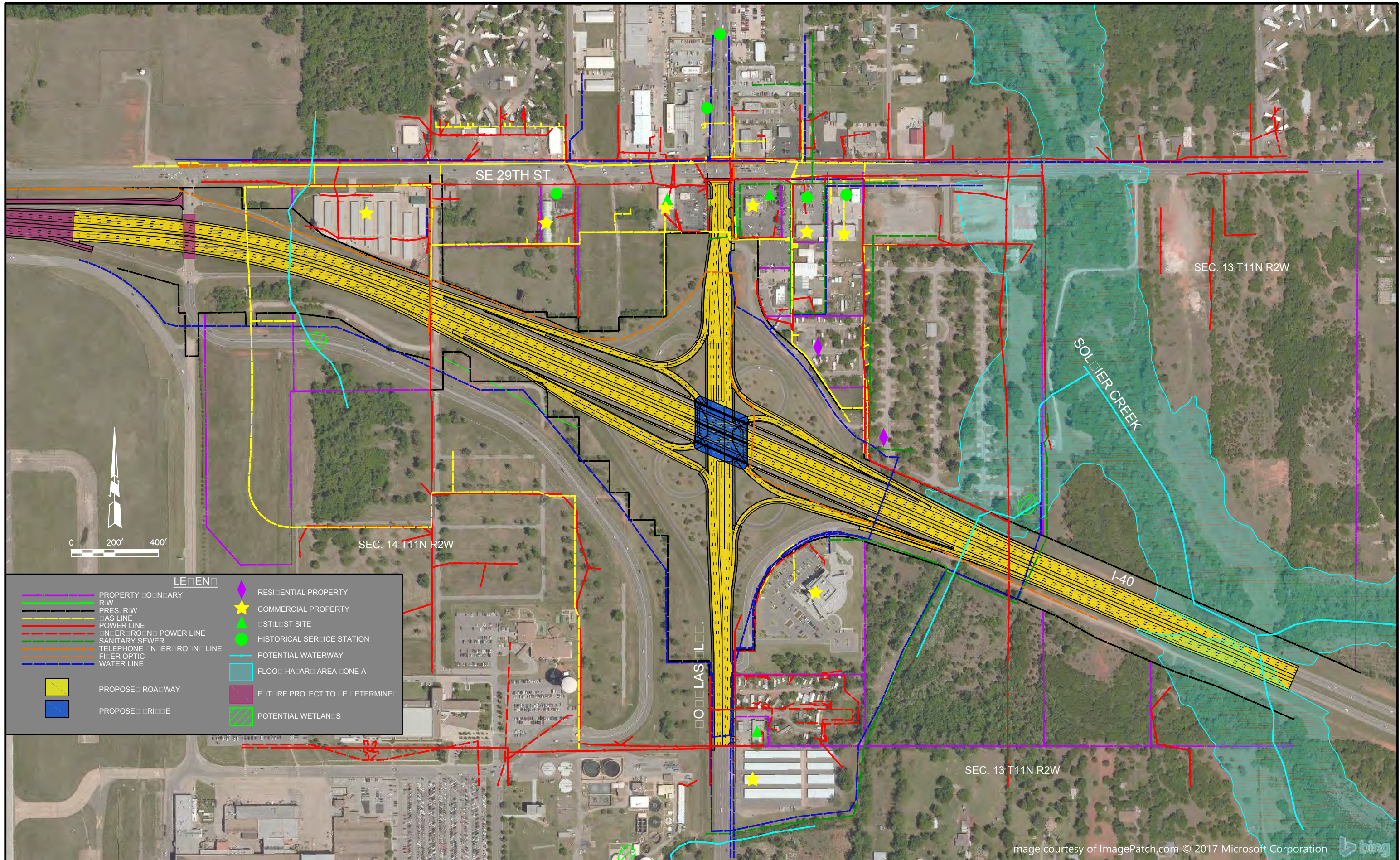
GRIFFIN PROPERTIES OKC, LLC
C/O LJS #24034
1024 SERPENTINE LN , STE 101
PLEASANTON, C , 94566

2917 S DOUGLAS LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

SHAW INVESTMENT PROPERTIES, LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

WATERMARKED KH LLC
PO BOX 300125
MIDWEST CITY, OK 73140-0125

GRIFFIN JACK L & RUTH M
3025 GRIFFIN CTR
OKLAHOMA CITY, OK 73150-1000



LEGEND			
	PROPERTY BOUNDARY		RESIDENTIAL PROPERTY
	PRES. R.W.		COMMERCIAL PROPERTY
	GAS LINE		EXISTING SITE
	POWER LINE		HISTORICAL SERVICE STATION
	UNDERGROUND POWER LINE		POTENTIAL WATERWAY
	SANITARY SEWER		FLOOD HAZARD AREA (ZONE A)
	TELEPHONE UNDERGROUND LINE		FUTURE PROJECT TO BE DETERMINED
	FIBER OPTIC		POTENTIAL WETLANDS
	PROPOSED ROADWAY		
	PROPOSED BRIDGE		

I-40 & DOUGLAS BOULEVARD
OKLAHOMA COUNTY & JP 28992(04)

DATE: 04-11-10
SCALE: AS SHOWN
DRWN BY: ME



PREferred ALTERNATIVE
ALTERNATIVE 1 - SINGLE POINT URBAN INTERCHANGE (SPUI)

Image courtesy of ImagePatch.com © 2017 Microsoft Corporation

ENVIRONMENTAL JUSTICE

Racial Distribution

Geographic Unit Analyzed	Total	White alone	Black or African American alone	American Indian and Alaska Native alone	Asian alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race alone	Two or More Races	Percent Minority
State of Oklahoma	3,751,351	2,706,845	277,644	321,687	65,076	4,369	154,409	221,321	27.84%
Oklahoma County, Oklahoma	718,633	464,387	110,890	25,119	21,454	780	57,946	38,057	35.38%
City of Midwest City	54,371	35,113	11,888	2,029	913	62	813	3,553	35.42%
City of Oklahoma City	579,999	363,646	87,354	20,533	23,310	586	54,593	29,977	37.30%
Block 3000, Block Group 3, Census Tract 1074.03, Oklahoma County	63	47	0	10	0	0	0	6	25.40%
Block 3014, Block Group 3, Census Tract 1074.03, Oklahoma County	22	18	4	0	0	0	0	0	18.18%
Block 3023, Block Group 3, Census Tract 1074.03, Oklahoma County	8	8	0	0	0	0	0	0	0.00%
Block 3024, Block Group 3, Census Tract 1074.03, Oklahoma County	94	70	16	2	2	0	3	1	25.53%
Block 1004, Block Group 1, Census Tract 1076.06, Oklahoma County	79	62	2	3	1	0	5	6	21.52%
Block 1022, Block Group 1, Census Tract 1076.06, Oklahoma County	4	4	0	0	0	0	0	0	0.00%
Block 2002, Block Group 2, Census Tract 1076.07, Oklahoma County	40	33	1	0	3	0	0	3	17.50%
Block 2018, Block Group 2, Census Tract 1076.07, Oklahoma County	5	5	0	0	0	0	0	0	0.00%

Source: U.S. Census Bureau 2010, Summary File, Table P1.

Median Household Income

Geographic Unit Analyzed	Total Households	Median household income in the past 12 months (in 2016 inflation-adjusted dollars)
State of Oklahoma	1,461,500	\$48,038
Oklahoma County	294,672	\$48,987
City of Midwest City	23,429	\$45,695
City of Oklahoma City	235,510	\$50,070
Block Group 3, Census Tract 1074.03, Oklahoma County	74	\$195,441
Block Group 1, Census Tract 1075, Oklahoma County	537	\$60,114
Block Group 1, Census Tract 1076.06, Oklahoma County	133	\$32,813
Block Group 2, Census Tract 1076.07, Oklahoma County	639	\$47,228

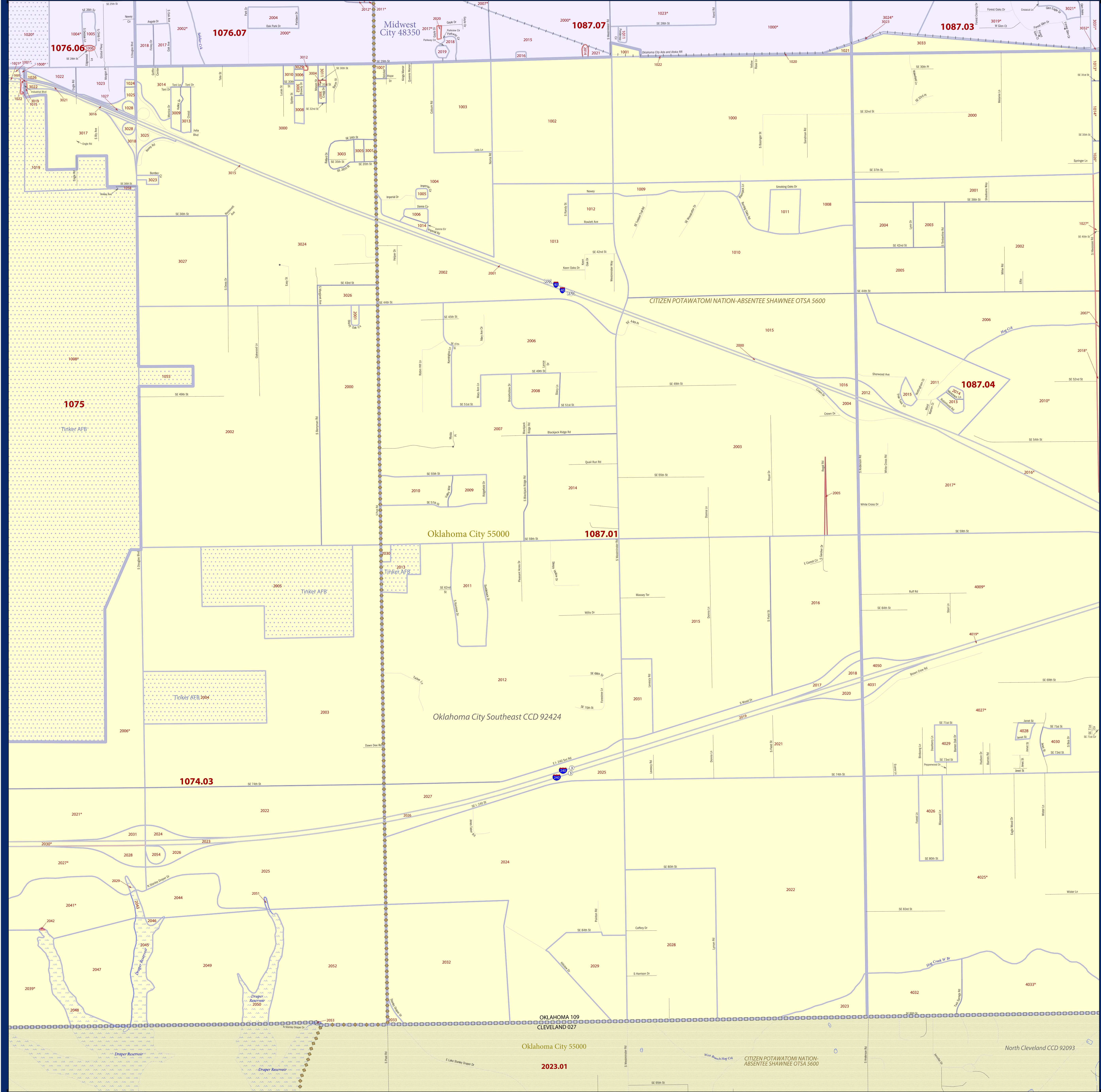
Source: U.S. Census Bureau 2016, American Community Survey 2012-2016 5-Year Estimates, Tables B17017 and B19013.

Limited English Proficiency (LEP) Analysis

Geographic Unit Analyzed	Estimated Total Population	Spanish Speaking			Chinese Speaking			Korean Speaking			Vietnamese Speaking		
		Estimated Total Population	Estimated Total LEP Population	Percent LEP	Estimated Total Population	Estimated Total LEP Population	Percent LEP	Estimated Total Population	Estimated Total LEP Population	Percent LEP	Estimated Total Population	Estimated Total LEP Population	Percent LEP
Census Tract 1074.03, Oklahoma County, Oklahoma	5515	160	58	1.1%	0	0	0.0%	127	71	1.3%	110	55	1.0%
Census Tract 1076.06, Oklahoma County, Oklahoma	206	5	5	2.4%	0	0	0.0%	0	0	0.0%	0	0	0.0%
Census Tract 1076.07, Oklahoma County, Oklahoma	3372	39	9	0.3%	4	4	0.1%	0	0	0.0%	0	0	0.0%

Source: U.S. Census Bureau 2016, American Community Survey 2011-2015 5-Year Estimates, Table B16001.

2010 CENSUS - CENSUS BLOCK MAP: Oklahoma City Southeast CCD, OK



SYMBOL DESCRIPTION	SYMBOL	LABEL STYLE
International	☆☆☆☆☆	CANADA
Federal American Indian Reservation	★ ★ ★ ★ ★	L'ANSE RESV N 1880
Off-Reservation Trust Land, Hawaiian Home Land	+ + + + +	T1880
Alaska Native Regional Corporation, Alaska Native Village Statistical Area, Tribal Designated Statistical Area	◆ ◆ ◆ ◆ ◆	KAW OTSA 5690
American Indian Tribal Subdivision	● ● ● ● ●	EAGLE NEST DIST 200
State American Indian Reservation	////	Tama Resvn 9400
State Designated Tribal Statistical Area	◆ ◆ ◆ ◆ ◆	Lumbee SDTSA 9815
Alaska Native Regional Corporation (or statistically equivalent entity)	▼ ▼ ▼ ▼ ▼	NANA ANRC 52120
County (or statistically equivalent entity)		NEW YORK 36
Minor Civil Division (MCD)	□ □ □ □ □	MONTGOMERY 031
Consolidated City	○ ○ ○ ○ ○	Bristol town 07485
Incorporated Place ^{1,2}	■ ■ ■ ■ ■	Hanna CCD 91650
Census Designated Place (CDP) ²	■ ■ ■ ■ ■	MILFORD 47500
Census Tract	■ ■ ■ ■ ■	Davis 18100
Census Block ³	■ ■ ■ ■ ■	Incline Village 35100
		33.07

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
Interstate	— 4 —	Geographic Offset or Corridor	— A —
U.S. Highway	— 2 —	Water Body	— PLAIN Lake —
State Highway	— 1 —	Swamp, Marsh, or Gravel Pit/Quarry	— Oxbow/Swamp —
Other Road	— R —	Glacier	— Bering Glacier —
Cul-de-sac	— C —	Military	— Fort Belvoir —
Circle	— C —	National or State Park, Forest, or Recreation Area	— Yosemite NP —
Alley, Walkway, or Ferry	— A —	Airport	— Airport —
Railroad	— R —	Selected Mountain Peaks	— Mt. Shasta —
Pipeline or Power Line	— P —	Island Name	— DEER IS —
Ridge or Fence	— R —	Inset Area	— A —
Property Line	— P —	Outside Subject Area	— A —
Perennial Stream	— P —		
Intermittent Stream or Feature Not Elsewhere Classified	— P —		

Where state, county, and/or MCD/CCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries. Where American Indian reservation and American Indian tribal subdivision boundaries coincide, the map shows only the American Indian reservation boundaries. Where Oklahoma tribal statistical area boundaries and American Indian tribal subdivision boundaries coincide, the map shows only the Oklahoma tribal statistical area boundaries.

1 A * following an MCD name denotes a false MCD. A ' following a place name indicates that a false MCD exists with the same name and FIPS code as the place; the false MCD label is not shown.

2 Place label color correlates to the place fill color.

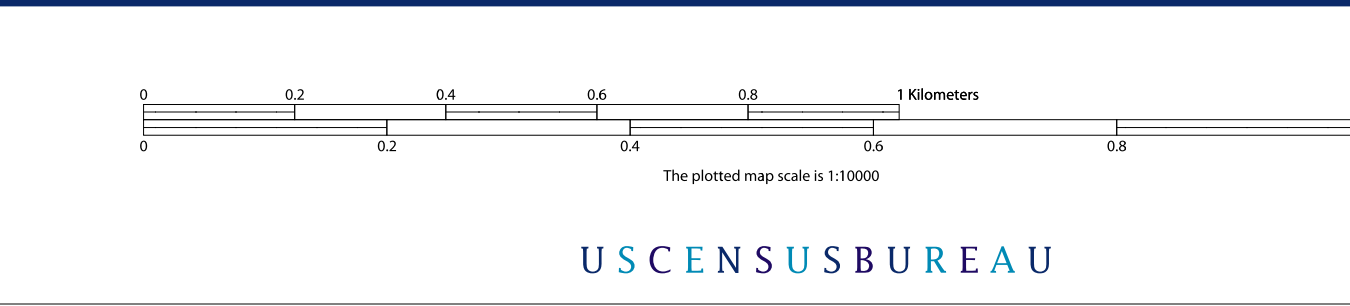
3 A * following a block number indicates that the block number is repeated elsewhere in the block. Blocks are symbolized and labeled only in the subject area of the map.

All legal boundaries and names are as of January 1, 2010. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic Vintage: 2010 Census (reference date: January 1, 2010)
 Data Source: U.S. Census Bureau's MAI/TIGER database (TAB100140)
 Map Created by Geography Division: April 24, 2011

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projection: Albers Equal Area Conic
 Datum: NAD 83
 Spheroid: GRS 80
 1st Standard Parallel: 34 10 47
 2nd Standard Parallel: 36 26 11
 Central Meridian: -98 43 53
 Latitude of Projection's Origin: 33 36 56
 False Easting: 0
 False Northing: 0

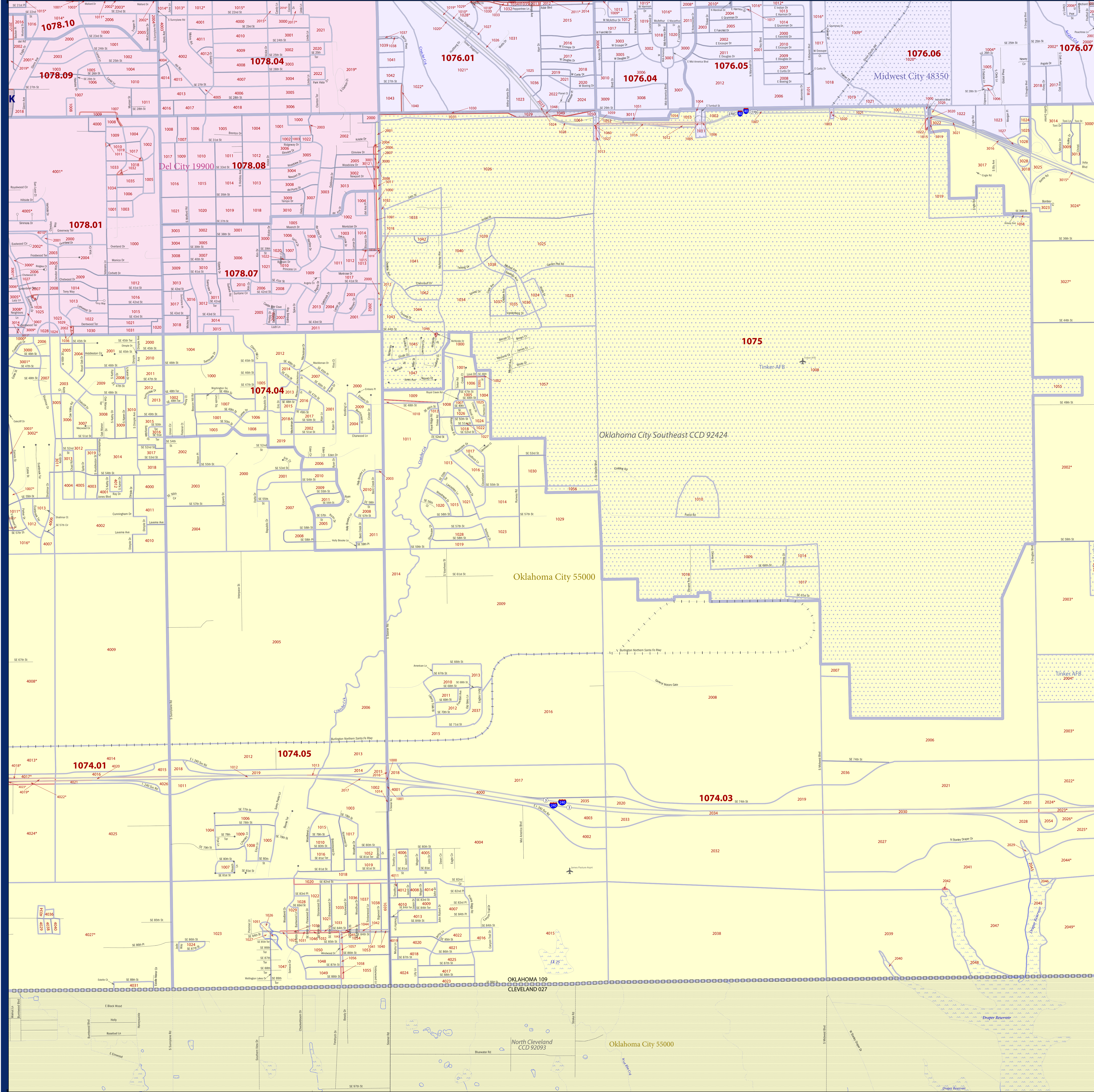


6	7	8
10	11	12

PARENT SHEET 11
 Total Sheets: 14
 Index Sheets: 1
 Parent Sheets: 13
 Inset Sheets: 0

NAME: Oklahoma City Southeast CCD (92424)
 ENTITY TYPE: Census County Division or statistically equivalent entity
 ST: Oklahoma (40)
 CO: Oklahoma (109)

2010 CENSUS - CENSUS BLOCK MAP: Oklahoma County, OK



LEGEND

SYMBOL DESCRIPTION	SYMBOL	SYMBOL	SYMBOL	LABEL STYLE
International	☆☆☆☆☆	Geographic Offset or Corridor	—	CANADA
Federal American Indian Reservation	★ ★ ★ ★ ★	Water Body	—	L'ANSE RESV N 1880
Off Reservation Trust Land, Hawaiian Home Land	+ + + + +	Swamp, Marsh, or Gravel Pit/Quarry	—	T1880
Oklahoma Tribal Statistical Area, Alaska Native Village Statistical Area, Tribal Designated Statistical Area	◆ ◆ ◆ ◆ ◆	Glacier	—	KAW OTSA 5690
American Indian Tribal Subdivision	● ● ● ● ●	Military	—	EAGLE NEST DIST 200
State American Indian Reservation	▨ ▨ ▨ ▨ ▨	National or State Park, Forest, or Recreation Area	—	Tama Resvn 9400
State Designated Tribal Statistical Area	◆ ◆ ◆ ◆ ◆	Airport	—	Lumbee SDTSA 9815
Alaska Native Regional Corporation	▼ ▼ ▼ ▼ ▼	Selected Mountain Peaks	▲	NANA ANRC 52120
State (or statistically equivalent entity)	▨ ▨ ▨ ▨ ▨	Inland Name	DEER IS	NEW YORK 36
County (or statistically equivalent entity)	▨ ▨ ▨ ▨ ▨	Inset Area	A	MONTGOMERY 031
Minor Civil Division (MCD)	○ ○ ○ ○ ○	Outside Subject Area	—	Bristol town 07485
Consolidated City	○ ○ ○ ○ ○			Hanna CCD 91650
Incorporated Place ^{1,2}	Color Swatches			MILFORD 47500
Census Designated Place (CDP) ²	Color Swatches			Davis 18100
Census Tract	Color Swatches			Incline Village 35100
Census Block ³	Color Swatches			33.07

DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL
Interstate	—	Geographic Offset or Corridor	—
U.S. Highway	—	Water Body	—
State Highway	—	Swamp, Marsh, or Gravel Pit/Quarry	—
Other Road	—	Glacier	—
Cul-de-sac	—	Military	—
Circle	—	National or State Park, Forest, or Recreation Area	—
4WD Trail, Stamen, Alley, Walkway, or Ferry	—	Airport	—
Railroad	—	Selected Mountain Peaks	▲
Pipeline or Power Line	—	Inland Name	DEER IS
Ridge or Fence	—	Inset Area	A
Perennial Stream	—	Outside Subject Area	—
Intermittent Stream or Feature Not Elsewhere Classified	—		

Where state, county, and/or MCD/CCD boundaries coincide, the map shows the boundary symbol for only the highest-ranking of these boundaries. Where American Indian reservation and American Indian tribal subdivision boundaries coincide, the map shows only the American Indian reservation boundaries. Where Oklahoma tribal statistical area boundaries and American Indian tribal subdivision boundaries coincide, the map shows only the Oklahoma tribal statistical area boundaries.

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2 Place label color correlates to the place fill color.

3 A * following a block number indicates that the block number is repeated elsewhere in the block.

All legal boundaries and names are as of January 1, 2010. The boundaries shown on this map are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement.

Geographic: Vintage: 2010 Census (reference date: January 1, 2010)
 Data Source: U.S. Census Bureau's MAI/TIGER database (TAB100140)
 Map Created by Geography Division: April 13, 2011

U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

Projection: Albers Equal Area Conic
 Datum: NAD 83
 Spheroid: GRS 80
 1st Standard Parallel: 34 10 47
 2nd Standard Parallel: 36 26 11
 Central Meridian: -98 43 53
 Latitude of Projection's Origin: 33 36 56
 False Easting: 0
 False Northing: 0

Scale: 1:100,000
 The plotted map scale is 1:100,000

USCENSUSBUREAU

Key to Sheets

24	25	26
31	32	33

PARENT SHEET 32
 Total Sheets: 57
 Index Sheets: 1
 Parent Sheets: 35
 Inset Sheets: 21

Location of County within State

Sheet Location within Entity

NAME: Oklahoma County (109)
 ENTITY TYPE: County or statistically equivalent entity
 ST: Oklahoma (40)

Geographic: UTM (GIG) Block Map Series
 2010 CENSUS BLOCK MAP (PARENT) - County
 210-610109-32

CULTURAL RESOURCES STUDIES



Oklahoma Historical Society

Founded May 27, 1893

State Historic Preservation Office

Oklahoma History Center • 800 Nazih Zuhdi Drive • Oklahoma City, OK 73105-7917
(405) 521-6249 • Fax (405) 522-0816 • www.okhistory.org/shpo/shpom.htm

February 9, 2017

Mr. Scott Sundermeyer, Director
ODOT Cultural Resources Program
111 East Chesapeake, Rm. 102, OU
Norman, OK 73019

RE: File #0670-17; Douglas Boulevard Bridge Replacement over I-40 in Midwest City (Including Bldg. #1)

Dear Mr. Sundermeyer:

We have received and reviewed the documentation submitted on the referenced project in Oklahoma County. Additionally, we have examined the information contained in the Oklahoma Landmarks Inventory (OLI) files and other materials on historic resources available in our office. We find that there are no known historic properties affected within the referenced project's area of potential effect.

In addition to our review, you must contact the Oklahoma Archeological Survey (OAS), 111 E. Chesapeake, #102, Norman OK 73019-5111 (#405/325-7211, FAX #405/325-7604), to obtain a determination about the presence of prehistoric resources that may be eligible for the National Register of Historic Places. Should the OAS conclude that there are no prehistoric archaeological sites or other types of "historic properties," as defined in 36 CFR Part 800.16(l), which are eligible for inclusion in the National Register of Historic Places within the project area and that such sites are unlikely to occur, we concur with that opinion.

The OAS may conclude that an on-site investigation of all or part of the project impact area is necessary to determine the presence of archaeological resources. In the event that such an investigation reveals the presence of prehistoric archaeological sites, we will defer to the judgment of the OAS concerning whether or not any of the resources should be considered "historic properties" under the Section 106 review process. If sites dating from the historic period are identified during the survey or are encountered during implementation of the project, additional assessments by the State Historic Preservation Office will be necessary.

Should further correspondence pertaining to this project be necessary, please reference the above underlined file number. If you have any questions, please contact Catharine M. Wood, Historical Archaeologist, at 405/521-6381. Thank you.

Sincerely,

Melvena Heisch
Deputy State Historic
Preservation Officer

MH;jr



Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

February 22, 2017

Scott Sundermeyer
Director, ODOT Cultural Resources Program
Oklahoma Department of Transportation
111 E Chesapeake, Room 102, University of Oklahoma
Norman, OK 73019-5111

Re: *Oklahoma Department of Transportation Cultural Resources Survey Report of the Proposed JP 28992(04) Improvements to the I-40/ Douglas Boulevard Interchange in Midwest City, Oklahoma County, Oklahoma.* Report by Kristina Wyckoff and Ana Eddings (ODOT).
Legal Description: Portions of Section 11, 12, 13, 14, T11N, R2W, Oklahoma County, Oklahoma.

Dear Mr. Sundermeyer,

This agency received the above-referenced cultural resources survey report of investigations for review and comment. The survey was conducted on January 10, 2017 by ODOT. The survey involved the field inspection of approximately 103.81 acres constituting the project's direct Area of Potential Effect. During this survey, the archaeologist recorded one historic site, Building 1. This agency confirms the recommendations contained in this report as they pertain to prehistoric archaeological resources. **However; we defer opinion on historic site, Building 1, and project effects to the Historic Archaeologist with the Oklahoma State Historic Preservation Office (SHPO), Oklahoma Historical Society.** This review has been conducted in cooperation with the Oklahoma SHPO. You must also have a letter from that office to document your consultation pursuant to Section 106 of the National Historic Preservation Act

Sincerely,

Kary L. Stackelbeck
State Archaeologist

:brb

cc: SHPO





**OKLAHOMA DEPARTMENT OF TRANSPORTATION
CULTURAL RESOURCES PROGRAM**

111 E. Chesapeake, Room 102, University of Oklahoma
Norman, OK 73019-5111
Phone: 405-325-7201/325-8665; FAX: 405-325-7604

January 24, 2017

Ms. Melvena Heisch
Deputy State Historic Preservation Officer
State Historic Preservation Office
Oklahoma Historical Society
800 Nazih Zuhdi Drive
Oklahoma City, Oklahoma 73105-7917

Dear Ms. Heisch:

Re: Oklahoma County FHWA Project JP 28992(04); Proposed improvements to the I-40/
Douglas Boulevard interchange in Midwest City.

Attached is a cultural resources survey report for the referenced project prepared by the ODOT Cultural Resources Program. No archaeological sites were identified during this investigation; however, one mid-20th century building was documented on an Historic Preservation Resource Identification (HPRI) form. Building 1 is a ca. 1963 concrete block commercial building of no distinctive style. Our assessment is that it lacks sufficient design distinction and is therefore not eligible for listing on the National Register of Historic Places (NRHP).

Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, it is our opinion that the project, as proposed, will have no effect on historic properties. We respectfully request your concurrence or comments to our opinion.

If you have any questions regarding this project, please contact me at 325-7201.

Sincerely,

Scott Sundermeyer
Director, ODOT Cultural Resources Program

cc: State Archaeologist

OKLAHOMA DEPARTMENT OF TRANSPORTATION CULTURAL RESOURCES SURVEY REPORT

Prepared by: ODOT Cultural Resources Program

County: Oklahoma

J/P Number: 28992(04)

Surveyed By: Kristina Wyckoff

Survey Date: January 10, 2017

Prepared By:

Report Date:

Kristina Wyckoff and Anna
Eddings

January 17, 2017

1. PROJECT DESCRIPTION:

This report documents a cultural resources survey for proposed replacement of the Douglas Boulevard bridge over I-40 in Midwest City, and reconstruction of the I-40/Douglas Boulevard interchange, including the removal of the Engle Road bridge.

The project study area, as defined, consists of an 8,020-foot (approximately 1.5 mile) corridor of I-40, beginning at Arnold Boulevard and extending east. The study area is an irregularly-shaped polygon centered along I-40, which also encompasses portions along Douglas Boulevard and 29th Street. At the eastern and western ends, the study area extends 200 feet north and south from the existing interstate center, which includes an additional 50 feet beyond the existing I-40 right-of-way throughout the majority of the study area. The study area includes bump-outs at existing bridges and roadways along the I-40 corridor, bump-outs along a drainage at the eastern end of the project, a north-south corridor of Douglas Boulevard, and the Douglas Boulevard/29th Street intersection. In total, the project study area encompasses 103.81 acres.

Five bridges (listed below) are present within the project study area boundaries; these bridges were constructed in 1961-1962, and are included in the March 2005 FHWA Interstate Highway System exemption that relieves Federal agencies from taking into account the effects of their actions on the Interstate Highway System, and are not subject to review. As such, these structures were not documented.

The existing A Avenue bridge over I-40 (Structure 5568 0540 X; NBI 15330) is an I-beam spans constructed in 1961.

The existing Industrial Boulevard bridge over I-40 (Structure 5568 0585 X; NBI 15559) is a continuous concrete slab constructed in 1962.

The existing Engle Road bridge over I-40 (Structure 5568R0608 X; NBI 15560) is a continuous concrete slab constructed in 1962.

The existing Douglas Boulevard bridge over I-40 (Structure 5568 0634 X; NBI 15573) is a continuous concrete slab constructed in 1962.

The existing I-40 bridge over Soldier Creek (Structure 5568 0686 X; NBI 15468) is a reinforced concrete box (skewed 60 degrees) constructed in 1962.

Legal Location: T11N R2W Sections 11-14

U.S.G.S. Quadrangle: Midwest City (1986) and Choctaw (1956 PR 1969, 1975)

2. ENVIRONMENTAL SETTING:

Geomorphic/Physiographic Region:

The study area is mapped within the Central Red-Bed Plains geomorphic province, where Permian red shales and

sandstones form gently-rolling hills and broad, flat plains (Geomorphie Provinces of Oklahoma 2008).

Geology and Soils:

The study area is mapped across Garber Sandstone geology dating to the Permian period and comprised of fine-grained sandstone irregularly-bedded with shale, chert, and/or mudstone conglomerate. Soils mapped across the study area belong to the Stephenville-Darnell and Zaneis-Renfrow-Grainola-Coyle associations. The setting is a dissected upland, which has been heavily disturbed by modern urban development; silty clay soils are mapped across undissected uplands in the study area and sandy clay soils are mapped along the minor dissections (Soldier Creek and an unnamed creek, which bisect the study area east and west of the Douglas Boulevard interchange). The Tribbey soil series is mapped along Soldier Creek at the easternmost edge of the study area; this series consists of red fine sandy loam with a dark grayish-brown fine sandy loam buried Ab horizon (127-165 centimeters below the surface [cmbs]). Shovel testing in the study area will be employed to determine the extent of disturbance from interstate and highway construction and development; along the drainages, and especially along Soldier Creek, exposed cut banks will be examined and shovel and auger tests will be excavated to determine whether buried soils and/or buried archaeological materials are present in the study area.

Vegetation:

The vegetation of the study area is mapped within Post Oak-Blackjack forest, known locally as Cross Timbers. This vegetation type is found throughout central and eastern Oklahoma and consists of forest, woodland, and grassland vegetation with post oak and blackjack oak representing the most important trees.

According to the USGS Land Cover map, the study area is comprised almost entirely of developed land and developed open space relating to the interstate, Tinker Air Force Base, Saint Anthony Healthplex East, and additional commercial and residential development. At the eastern end of the study area the Land Cover map indicates forested land and herbaceous land, which generally represents open pastures but in this case appears to indicate a more thinly-wooded area between the two dissections east of the I-40/Douglas Boulevard interchange. Review of Google Earth imagery dating to 2016 indicates the majority of the study area consists of sodded right-of-way with scattered hardwoods west of the interchange and forest vegetation extending into the right-of-way east of the interchange.

Vegetation Coverage:

<u>XXX</u>	0-25%	Eroded areas
	25-50%	
<u>XXX</u>	50-75%	Wooded areas
<u>XXX</u>	75-100%	Sodded right-of-way and commercial lawns

3. CULTURAL BACKGROUND:

A. Background Research:

- XXX State Site Files at Oklahoma Archeological Survey (OAS)
- XXX SHPO NRHP and DOE Files
- XXX Native American Tribes and Nations Consulted by Procedures Established with FHWA and ODOT: Citizen Potawatomi Nation, Iowa Tribe, Kickapoo Tribe, Osage Nation, and Wichita and Affiliated Tribes.
- XXX Other sources: General Land Office (GLO) Original Survey Map (1873)
USDA Soil Survey Map of Oklahoma County (1906)
USGS Moore 15' Quadrangle (1892, 1934, 1938)
USGS Crutcho Creek 7.5' Quadrangle (1934)

USGS Choctaw 7.5' Quadrangle (1956, 1969, 1975)
USGS Midwest City 7.5' Quadrangle (1986)
Oklahoma County aerial imagery (1951, 1957)
Oklahoma County General Highway and Transportation Maps (GHM)
(1940, 1948, 1954, 1963, 1970, 1985)

Brooks, Robert L.
2005 Oklahoma Atlas of Archaeological Sites and Management Activities.
<http://www.ou.edu/cas/archsur/Atlas.htm> accessed online January 13, 2017.
1985 Resource Protection Planning Process Manuscript Region 5. Report
submitted to the State Historic Preservation Office Oklahoma Historical
Society. Unpublished manuscript on file at the Oklahoma Archeological
Survey, Norman.

US Geological Survey, 20140331, NLCD 2011 Land Cover (2011 Edition)
US Geological Survey, Sioux Falls, SD.

1969 *Soil Survey Oklahoma County, Oklahoma*. United States Department
of Agriculture, Soil Conservation Service, and Oklahoma Experiment
Station. U.S. Government Printing Office, Washington, D.C.

2008 *Geomorphic Provinces of Oklahoma*, Earth Sciences and Mineral
Resources of Oklahoma, edited by Kenneth S. Johnson and Kenneth V. Luza.
University of Oklahoma Printing Services, Oklahoma Geological Survey,
Norman.

RESULTS OF BACKGROUND RESEARCH/SUMMARY OF CULTURAL BACKGROUND:

A review of the Oklahoma Archeological Survey (OAS) maps indicates no previously-recorded archaeological sites are mapped in the project study area; however, two previously-recorded prehistoric archaeological sites are mapped within the study area's one-mile vicinity (34OK28 and 34OK33).

Site 34OK28 is located on a north-south ridge overlooking the west bank of Soldier Creek, approximately 5,000 feet north of the project study area. The site is bisected by 15th Street in Midwest City; the northern half is located in a golf course and the southern half has been completely disturbed and developed over. The site was recorded by Jim Cox as a small prehistoric campsite and was identified by a surface scatter of lithic tools and debris, including four Ellis dart points, one Ellis-like dart point, two dart point tips, one dart point midsection, one squared knife base, four side scrapers, one possible shell scraper, 12 flakes of Kay County chert, 35 flakes of Ogallala chert, five flakes of quartzite, and five flakes of unknown material. This site was not previously assessed for NRHP eligibility.

Site 34OK33 is located mid-way between Crutch Creek and Soldier Creek in a developed area of Midwest City north of Tinker Air Force Base and approximately 3,650 feet west of the project study area. The site was buried beneath 3-4 feet (approximately 90-120 centimeters) of sediments and was exposed during infrastructure improvements, specifically laying of pipe in a five-foot square pit, and was recorded as an Archaic period camp by David Sanches and Roger Saunders in 1973. Artifacts documented from this site include Archaic points, large corner-notched points, large knife fragments, large arrow points of the Young and Fresno variety, and one corner-notched arrow point. Richard Drass provided updates to the site form in 1977, and stated the site was located "in a residential area" and "probably badly disturbed." This site was not previously assessed for NRHP eligibility.

Robert Brooks included Oklahoma County in Region 5 of his Resource Protection Planning Process Management manuscript (1985). Region 5, the largest management region defined by Brooks, consists of southern tall grass prairie and cross-timbers. Much of the archaeological work in this region has focused on surveys and excavations of sites threatened by major reservoir construction (Brooks 1985:5). Paleoindian

period through Late Prehistoric period occupations and 19th and 20th century occupations have been recorded in this region (Brooks 1985).

According to the Oklahoma Atlas of Archaeological Sites and Management Activities, in 2004, 192 archaeological sites had been recorded in Oklahoma County (Brooks 2005). At that time, the recorded sites included two with Paleoindian period components, 25 with Archaic period components, 14 with Woodland period components, 19 with Late Prehistoric period components, and 48 with 19th and 20th century components. There are currently 252 archaeological sites recorded in Oklahoma County as a whole.

The reviewed maps and aerials indicate the western two-thirds of the study area experienced considerable residential and commercial development since the mid-1950s. A residential neighborhood is depicted in the northeast quarter of Section 14 (T11N R2W) on the 1956 Midwest City and Choctaw quadrangles and the 1957 aerial; however, portions of this development were razed when I-40 and the associated bridges were constructed through the study area in 1961-1962, and the remaining homes were demolished 2003-2005 (Google Earth imagery). Two portions of deteriorating streets are the only visible remnants of this development in the study area (2016 Google Earth imagery). A trailer park first indicated in the northwest quarter of Section 13 (T11N R2W) on the 1969 Choctaw quadrangle was abandoned 2012-2013 (Google Earth imagery), the deteriorating street that formed the southwestern edge of the trailer park falls within the study area boundary.

4. METHODOLOGY:

Field Investigation Methodology:

- 100% Windshield Survey
- XXX Windshield survey with sample pedestrian survey
- XXX 12.5 % pedestrian survey
- XXX Subsurface Testing. Describe methodology of testing under comments, below:

DISCUSSION OF METHODOLOGY:

The majority of the study area, which largely conforms to the existing right-of-way, has been considerably disturbed by construction of the existing interstate roadways, bridges, and drainages, and by commercial and residential development. These disturbed areas were subjected to windshield survey and disturbances in these areas were confirmed with intermittent shovel testing (See Figure 2). Portions of the study area disturbed by residential development, but not by interstate highway construction, specifically the razed neighborhoods immediately southwest and northeast of the I-40/Douglas Boulevard interchange, were subjected to pedestrian archaeological survey with excavation of intermittent shovel and auger tests. The 50-foot strip of study area north and south of the existing I-40 right-of-way in the wooded portion at the eastern end of the project was also subjected to pedestrian survey with shovel testing, and auger tests were excavated within the base of shovel tests in areas along the dissecting drainages. Additionally, creek banks and eroded areas were examined for evidence of surface and/or buried archaeological materials and/or buried soils.

5. RESULTS OF INVESTIGATION:

- No archeological sites or buildings recorded in study area.
- XXX Resources recorded in study area assessed as **not eligible** for the NRHP. Forms being submitted for agency review.
- Oklahoma Archeological Site Survey Form(s) for State Archeologist files.

XXX Historic Preservation Resource Identification Form(s) for SHPO files.

 Oklahoma Bridge Survey and Inventory Form.

 NRHP-eligible properties recorded in study area.

Forms being submitted for agency review.

 Oklahoma Archeological Site Survey Form(s) for State Archeologist files.

 Historic Preservation Resource Identification Form(s) for SHPO files.

 Oklahoma Bridge Survey and Inventory Form.

 Archeological sites requiring further assessment (i.e. evaluative testing)

COMMENTS AND DESCRIPTION OF FINDINGS:

No archaeological sites were identified or recorded during this investigation; however, one building was documented on a Historic Preservation Resource Identification (HPRI) form for SHPO review.

Building 1 is a ca. 1963 concrete block commercial building of no distinctive style. Our assessment is that this building lacks sufficient architectural distinction and is not eligible for inclusion in the NRHP.

Soils observed in the existing highway and interstate right-of-way were heavily compacted reddish-brown silty and sandy clay. In addition to disturbances related to highway and interstate construction, the western two-thirds of the project study area have been disturbed by modern residential and commercial development. The portion of the study area immediately southwest of the interchange, along the eastern side of Taxpayers Boulevard, was been disturbed by residential development and subsequent razing; shovel and auger tests in this area revealed soils comprised of reddish-brown silty clay loam (0-20 cmbs) which overlay mottled red and reddish-brown silty clay loam (20-40 cmbs), which overlay reddish-brown clay (40-60 cmbs) which overlay red clay (60-100 cmbs). Disturbances in the eastern third of the project study area are limited to interstate construction; the portion of the study area beyond the existing right-of-way consists of woods and pasture land. Soils in this area were comprised of loamy sands and sandy clay. Because the Tribbey soil series, mapped along the path of Soldier Creek at the eastern end of the project study area, can contain a buried soil, auger tests were excavated in the base of shovel tests in this portion of the study area. Soils in this area were comprised of reddish-brown fine sandy loam (0-3 cmbs) which overlay reddish-brown clayey sand (3-10 cmbs), which graded into reddened sandy clay loam (between 10-90 cmbs), this in turn overlay red sand beginning at 90 cmbs, and the sand was inundated by 150 cmbs. The buried Ab horizon described in the Tribbey soil series profile is documented between 127-165 cmbs; auger tests in this portion of the study area were excavated to 170 cmbs, but no evidence of a buried soil was observed. Additionally, creek banks were examined at each of the drainages and no archaeological materials or buried soils were observed.

6. RECOMMENDATIONS:

 Plan Notes requiring avoidance of cultural resources in off-project areas

 XXX **Approval to proceed** with the proposed project as planned with no additional research. If subsurface archaeological materials are exposed during construction, the Contractor and Resident Engineer shall notify the Department Archaeologist in accordance with Section 202.04(a), Standard Specifications for Highway Construction.

 Approval NOT Recommended, until one or more of the following measures are completed.

_____ **Additional consultation with SHPO** regarding NRHP-eligible Properties

_____ **Revise design** to avoid/protect resources

_____ **NRHP Eligibility Archaeological Test Excavations**

_____ **Implementation of MOA** with SHPO regarding Mitigation of Adverse Effects to Historic Properties

SUMMARY AND COMMENTS REGARDING RECOMMENDATIONS:

Pursuant to 36 CFR 60.4, Building 1 lacks sufficient architectural distinction and is not eligible for inclusion in the NRHP.

Pursuant to 36 CFR 800.4(d)(1), it is our opinion there are no historic properties affected. We recommend the project proceed as planned.

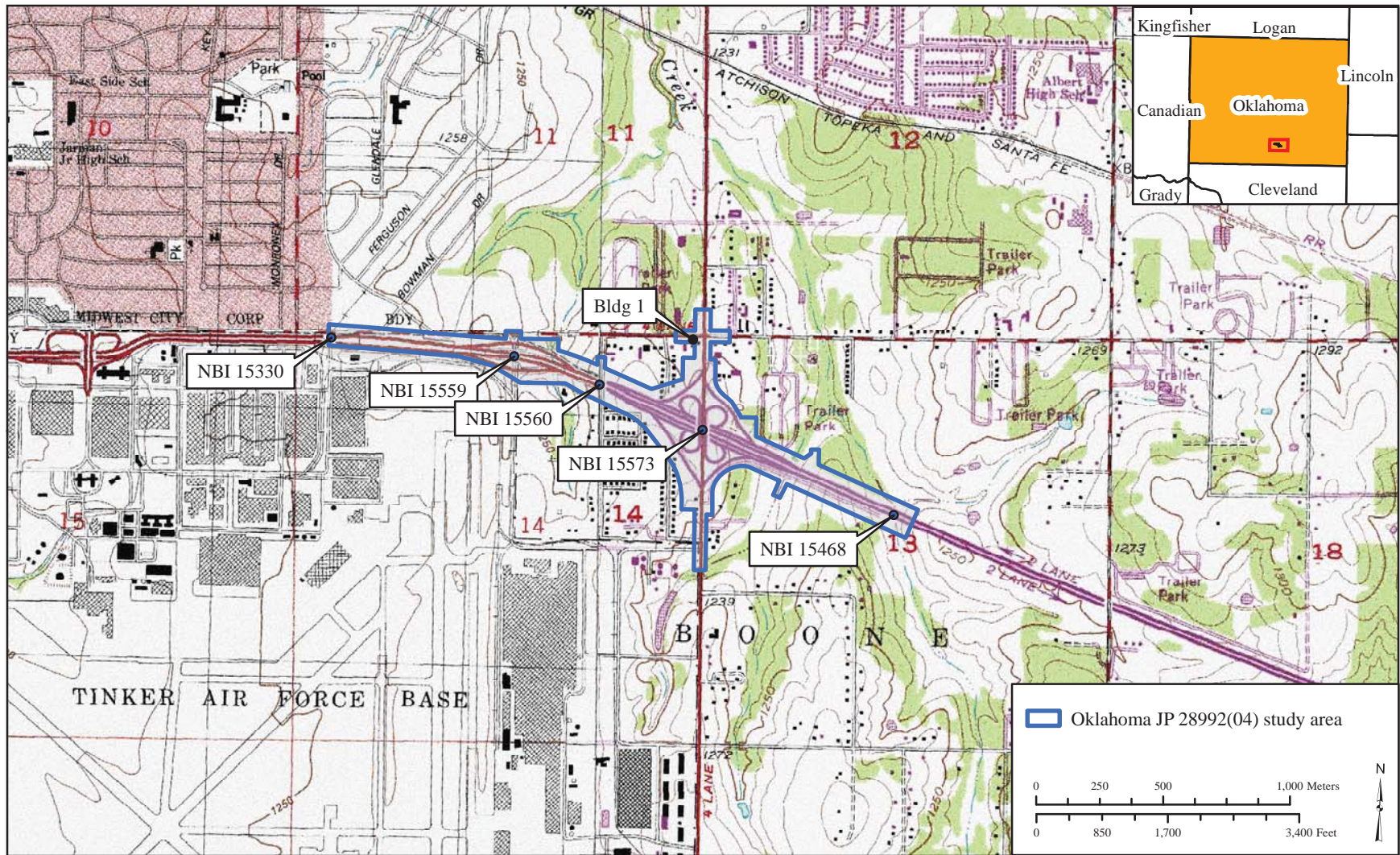


Figure 1. Oklahoma County JP 28992(04): I-40 and Douglas Boulevard bridge replacement and interchange reconstruction.

Basemap: National Agriculture Imagery Program (NAIP) 2015; Midwest City (1986) and Choctaw (1956 PR 1969, 1975) 7.5' USGS Quadrangles.
 Legal location: T11N R2W; scale 1:24,000.



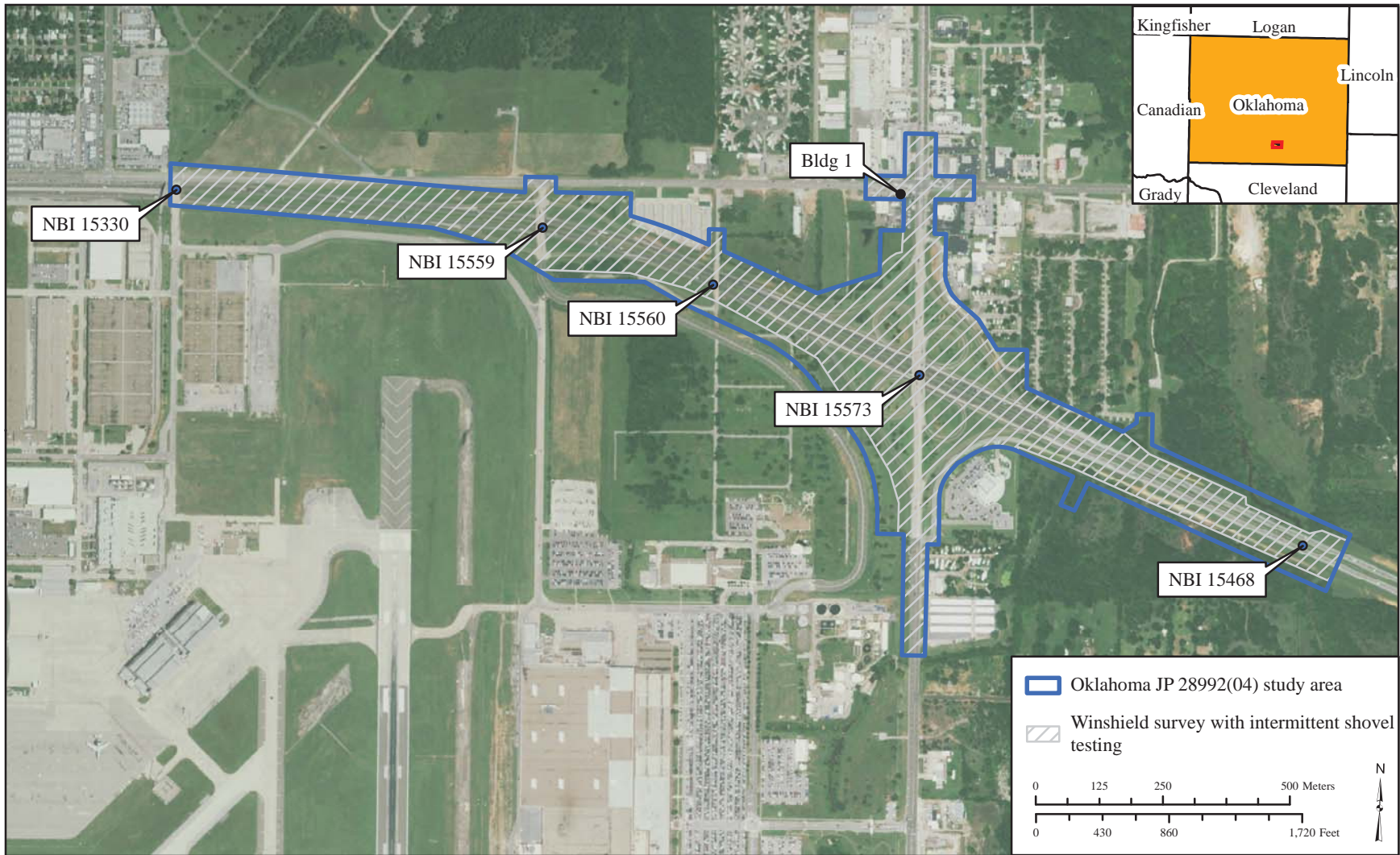


Figure 2. Oklahoma County JP 28992(04): I-40 and Doubles Boulevard bridge replacement and interchange reconstruction. Map indicates areas subjected to windshield survey with intermittent shovel testing; all remaining areas were subjected to pedestrian archaeological survey and shovel testing.

Basemap: National Agriculture Imagery Program (NAIP) 2015; Midwest City (1986) and Choctaw (1956 PR 1969, 1975) 7.5' USGS Quadrangles.
 Legal location: T11N R2W; scale 1:12,000.



November 28, 2016

Citizen Potawatomi Nation
 Attn: Chairman John A. Barrett
 1601 S Gordon Cooper Drive
 Shawnee, OK 74801

Dear Chairman Barrett:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

County	Oklahoma	Job Piece #	28992(04)	Anticipated Let Date	2020
Project description	Bridge replacement and interchange reconstruction at I-40 and Douglas Boulevard, 6.5 miles east of I-35, including removal of Engle Road bridge				
Location	Sections 11, 12, 13, & 14 T11N R2W. See enclosed map.				
Additional information	This project is on a new alignment: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no This project will require new or temporary right of way: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no This project involves ground disturbance: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no				

If this undertaking may affect properties of religious and cultural significance to your tribe, please notify me as soon as possible. Likewise, if this undertaking occurs on land held in trust for the tribe and the tribe has 101(d)(2) status from the National Park Service, please make this office aware of the location of the trust property. In order to provide the most thorough consideration of these properties in the planning process, we appreciate receiving your response to this request within 30 days. Please rest assured that we will respect your wishes regarding the confidentiality of any information that you provide.

The proposed project area will be subject to a cultural resources survey. The goal of this survey is to make a reasonable and good faith effort to identify historic properties within the area of potential effect, in accordance with 36 CFR Part 800.4. The survey will be performed in consultation with the Oklahoma State Historic Preservation Office and other consulting parties as appropriate. You will be provided a copy of the cultural resources report upon its completion.

If you have any questions or would like to meet regarding this project, please contact me by telephone at 405.521.3632 or email at rfair@odot.org.

Sincerely,



Rhonda S. Fair, Ph.D.
 Director
 ODOT Tribal Coordination

cc: Kelli Mosteller, THPO

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."

January 25, 2017

Citizen Potawatomi Nation
Attn: Chairman John A. Barrett
1601 S Gordon Cooper Drive
Shawnee, OK 74801

Dear Chairman Barrett:

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No archaeological sites were identified during this investigation; however, one mid-20th century building was documented. Building 1 is a ca. 1963 concrete block commercial building of no distinctive style. Our assessment is that it lacks sufficient design distinction and is therefore not eligible for listing on the National Register of Historic Places (NRHP). Pursuant to 36 CFR 800.4(d)(1), and based upon the results of this study, our opinion is that the project, as proposed, will have no effect on historic properties.

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Sincerely,



Rhonda S. Fair, Ph.D.
Director
ODOT Tribal Coordination

cc: Kelli Mosteller, THPO

November 28, 2016

Iowa Tribe of Oklahoma
 Attn: Chairman Bobby Walkup
 335588 East 750 Road
 Perkins, OK 74059

Dear Chairman Walkup:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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Sincerely,



Rhonda S. Fair, Ph.D.
 Director
 ODOT Tribal Coordination

cc: Historic Preservation Office

January 25, 2017

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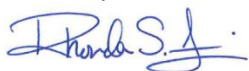
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Sincerely,



Rhonda S. Fair, Ph.D.
Director
ODOT Tribal Coordination

cc: Historic Preservation Office

November 28, 2016

Kickapoo Tribe of Oklahoma
 Attn: Chairman David Pacheco, Jr.
 Post Office Box 70
 McLoud, OK 74851

Dear Chairman Pacheco:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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Sincerely,



Rhonda S. Fair, Ph.D.
 Director
 ODOT Tribal Coordination

cc: Historic Preservation Office

January 25, 2017

Kickapoo Tribe of Oklahoma
Attn: Chairman David Pacheco, Jr.
Post Office Box 70
McCloud, OK 74851

Dear Chairman Pacheco:

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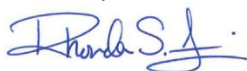
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Sincerely,



Rhonda S. Fair, Ph.D.
Director
ODOT Tribal Coordination

cc: Kent Collier

November 28, 2016

Osage Nation
 Attn: Principal Chief Geoffrey Standing Bear
 627 Grandview
 Pawhuska, OK 74056

Dear Principal Chief Standing Bear:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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Sincerely,



Rhonda S. Fair, Ph.D.
 Director
 ODOT Tribal Coordination

cc: Tribal Historic Preservation Office



TRIBAL HISTORIC PRESERVATION OFFICE

Date: December 16, 2016

File: 1617-1552OK-12

RE: ODOT JP# 28992(04) Bridge Replacement and Interchange Reconstruction at I-40 and Douglas Boulevard Including Removal of Engle Road Bridge in Oklahoma County, Oklahoma

Oklahoma Department of Transportation
Rhonda Fair
200 NE 21st Street, Room 3A8
Oklahoma City, OK 73105-3204

Dear Dr. Fair,

The Osage Nation Historic Preservation Office has received notification and accompanying information for the proposed project ODOT JP# 28992(04) Bridge Replacement and Interchange Reconstruction at I-40 and Douglas Boulevard Including Removal of Engle Road Bridge in Oklahoma County, Oklahoma. There are no known Osage resources within the project area. This office looks forward to reviewing the final report.

Should you have any questions or need any additional information, please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Sincerely,


James Munkres
Archaeologist



TRIBAL HISTORIC PRESERVATION OFFICE

Date: January 27, 2017

File: 1617-1552OK-12

RE: ODOT JP# 28992(04) Bridge Replacement and Interchange Reconstruction at I-40 and Douglas Boulevard Including Removal of Engle Road Bridge in Oklahoma County, Oklahoma

Oklahoma Department of Transportation
Rhonda Fair
200 NE 21st Street, Room 3A8
Oklahoma City, OK 73105-3204

Dear Dr. Fair,

The Osage Nation Historic Preservation Office has received notification of the Public Meeting conducted on January 17, 2017 and accompanying information presenting the three proposed alternatives for the proposed project ODOT JP# 31807(04) Intersection Modifications at U.S. 81 and State Highway 66 in El Reno in Canadian County, Oklahoma. The Osage Nation does not have a preferred alternative at this time. This office looks forward to reviewing the final report.

Should you have any questions or need any additional information, please feel free to contact me at the number listed below. Thank you for consulting with the Osage Nation on this matter.

Sincerely,


James Munkres
Archaeologist

January 25, 2017

Osage Nation
Attn: Principal Chief Geoffrey Standing Bear
627 Grandview
Pawhuska, OK 74056

Dear Principal Chief Standing Bear:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is consulting on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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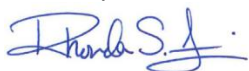
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Sincerely,



Rhonda S. Fair, Ph.D.
Director
ODOT Tribal Coordination

cc: Tribal Historic Preservation Office

November 28, 2016

Wichita and Affiliated Tribes
 Attn: President Terri Parton
 Post Office Box 729
 Anadarko, OK 73005

Dear President Parton:

Re: Section 106 consultation for proposed Federal-Aid undertaking in Oklahoma County, Oklahoma; JP# 28992(04)

Pursuant to 36 CFR Part 800.2(c)(2), the Oklahoma Department of Transportation is initiating consultation on behalf of the Federal Highway Administration regarding historic properties that may be affected by the following project.

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Rhonda S. Fair, Ph.D.
 Director
 ODOT Tribal Coordination

cc: Historic Preservation Office



January 25, 2017

Wichita and Affiliated Tribes
Attn: President Terri Parton
Post Office Box 729
Anadarko, OK 73005

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Table with 2 rows and 6 columns: County, Oklahoma, Job Piece #, 28992(04), Anticipated Let Date, 2020, Project description, Bridge replacement and interchange reconstruction at I-40 and Douglas Boulevard, 6.5 miles east of I-35, including removal of Engle Road bridge

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Sincerely,

[Handwritten signature]

Rhonda S. Fair, Ph.D.
Director
ODOT Tribal Coordination

cc: Historic Preservation Office

BIOLOGICAL STUDIES

STATUS: Cleared for 404 2/6/2017
 Cleared for Utilities 2/6/2017
 Cleared for Construction 2/6/2017

**BIOLOGICAL STUDIES TRACKING FORM
 For**

County	Oklahoma
JP Number	28992(04)
USFWS TAILS #	02EKOK00-2017-SLI-0562
Original IPaC List	12/12/2016
Email used to request IpaC official species list	rellis@triaddesigngroup.com
Last Updated Species List Date	Click here to enter a date.
ROW	Click here to enter a date.
Let Date	Click here to enter a date.
90 Day Prior to Let IpaC List	Click here to enter a date.
Duration expected	Click here to enter text.
Original Biological Assessment and Waters and Wetlands Report Prepared By:	Triad
Most Recent Field Date:	1/11/2017
Original Report Date:	2/6/2017
USFWS Consultation Submittal:	No Effect All Species
USFWS Concurrence:	None required
Original Tracking Form Prepared by :	Elizabeth Nichols
Original Tracking Form date:	2/6/2017
Update Reason	Click here to enter text.
Updated By Whom:	Click here to enter text.
Amended USFWS Consultation Submittal:	Click here to enter a date.
Amended USFWS Concurrence:	Click here to enter a date.
Tracking Form Updated By Whom:	Click here to enter text.
Tracking Form Updated Date:	Click here to enter a date.
<i>ADD MORE LINES AS NEEDED FOR EACH TIME PROJECT IS UPDATED</i>	

Form Date: January 24, 2017

Project Name from Oracle

I-40 and Douglas Boulevard bridge and interchange (including removal of Engle Rd. bridge)

Project Description

Other - Interchange & Bridge

Check if any of the following is expected s part of the proposed action

- Work within the OHWM is expected
- Project is OFF-SET alignment or NEW alignment
- Project involves **NO OFF EXISTING PAVEMENT** work
- Project requires new ROW (permanent &/or temporary)
- Tree removal is expected <100' from edge of existing pavement
- 100' -300' from edge of existing pavement
- >300' from edge of existing pavement

STATUS: Cleared for 404
 Cleared for Utilities
 Cleared for Construction

2/6/2017
 2/6/2017
 2/6/2017

2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Species	Listing Status	IPaC	Effect Determination for IPaC listed species
		Check if Yes	
Black-capped Vireo	Endangered	<input type="checkbox"/>	Choose an item.
Interior Least Tern	Endangered	<input checked="" type="checkbox"/>	No Effect
Red-cockaded Woodpecker	Endangered	<input type="checkbox"/>	Choose an item.
Whooping Crane	Endangered	<input checked="" type="checkbox"/>	No Effect
Gray Bat	Endangered	<input type="checkbox"/>	Choose an item.
Indiana Bat	Endangered	<input type="checkbox"/>	Choose an item.
Ozark Big-eared Bat	Endangered	<input type="checkbox"/>	Choose an item.
Neosho Mucket	Endangered	<input type="checkbox"/>	Choose an item.
Ouachita Rock Pocketbook	Endangered	<input type="checkbox"/>	Choose an item.
Scaleshell Mussel	Endangered	<input type="checkbox"/>	Choose an item.
Winged Mapleleaf	Endangered	<input type="checkbox"/>	Choose an item.
American Burying Beetle	Endangered	<input type="checkbox"/>	Choose an item.
Harperella	Endangered	<input type="checkbox"/>	Choose an item.
Piping Plover	Threatened	<input checked="" type="checkbox"/>	No Effect
Red Knot	Threatened	<input checked="" type="checkbox"/>	No Effect
Northern Long-eared Bat	Threatened	<input type="checkbox"/>	Choose an item
Arkansas River Shiner	Threatened	<input type="checkbox"/>	Choose an item.
Leopard Darter	Threatened	<input type="checkbox"/>	Choose an item.
Neosho Madtom	Threatened	<input type="checkbox"/>	Choose an item.
Ozark Cavefish	Threatened	<input type="checkbox"/>	Choose an item.
American Alligator	Threatened	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Mussel	Threatened	<input type="checkbox"/>	Choose an item.
Rattlesnake-master Borer Moth	Candidate	<input type="checkbox"/>	Choose an item.
Whooping Crane Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Arkansas River Shiner Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Leopard Darter Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Neosho Mucket Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.
Rabbitsfoot Critical Habitat	Designated	<input type="checkbox"/>	Choose an item.

	NEPA Footprint	Construction Footprint
Number of acres within the NEPA Study Footprint & Construction Footprint (if known)	112	Click here to enter text.
Number of acres of perennial plant vegetation (ABB habitat) within the NEPA Footprint & Construction Footprint (if known)	Click here to enter text.	Click here to enter text.
Number of acres of forested/wooded area (Ibat and NLEB habitat) within the NEPA Footprint & Construction Footprint (if known)	Click here to enter text.	Click here to enter text.

<u>STATUS:</u>	Cleared for 404	2/6/2017
	Cleared for Utilities	2/6/2017
	Cleared for Construction	2/6/2017

Bald Eagle Assessment	Not expected to impact
Migratory Bird Assessment of Transportation Structures	no migratory birds observed nesting on transportation structures
Migratory bird habitat assessment	nesting habitat for migratory birds will be impacted

Species Plan Notes

Migratory Bird Note: Migratory birds are protected by the federal Migratory Bird Treaty Act. Many birds commonly use bridges and culverts for nesting. The nesting season for most bird species extends from April 1 to August 31. The project was surveyed for migratory bird nests in January 2017. Although no nests were observed, the survey is valid only until the start of the 2017 nesting season (beginning April 1). The Resident Engineer shall contact the ODOT Biologist at 405-521-2515 if any bird use of the existing structures is observed. If birds are observed then extension or demolition of the existing bridges and culverts shall be conducted between September 1, and March 3 (when migratory bird nests are not occupied).

Waters and Wetlands Delineation Status

Original delineation

Wetlands and Ponds

Total Number of Sites	Water Body Type	Potential Jurisdiction Status	Acres within the NEPA Footprint
1	Scrub Shrub Wetland	Likely Jurisdictional	0.03
Click here to enter text.	Choose an item.	Choose an item.	Click here to enter text.
Click here to enter text.	Choose an item.	Choose an item.	Click here to enter text.

Streams and Drainages

Total Number of sites	Water body name	USGS Designation	Potential Jurisdictional Status	Acres within the NEPA Footprint	Liner Feet within the NEPA Footprint
4	Tributary to Soldier Creek	mapped intermittent	Likely Jurisdictional	0.95	2,720
1	Tributary to Soldier Creek	unmapped ephemeral drainages	Likely Jurisdictional	0.05	485
Total Likely Jurisdictional				1	3,205
Click here to enter text.	Click here to enter text.	Choose an item.	Choose an item.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Choose an item.	Choose an item.	Click here to enter text.	Click here to enter text.

**ENDANGERED, THREATENED AND CANADATE SPECIES, DESIGNATED
CRITICAL HABITAT, BALD EAGLE AND SWALLOW ASSESSMENT**

For I-40 & Douglas Boulevard Interchange

USFWS TAILS #		02EKOK00-2017-SLI-0562			
Email used to request IPaC official species list			rellis@triaddesigngroup.com		
County	Oklahoma	JP Number	28992(04)	Project Number	J2-8992(004)
Road Number	I-40	Water Body Name		Unnamed tributaries to Soldier Creek	
ROW Date		Let Date		Project Length	Apx. 1.5 miles along I-40; Apx. 0.6 miles along Douglas Blvd
Project General Location		I-40 and Douglas Boulevard interchange in Midwest City, 6.5 miles east of I-35			
Project Statement From Oracle		I-40 and Douglas Boulevard bridge and interchange (including removal of Engle Rd. bridge)			

Prepared for:
Oklahoma Department of Transportation
Environmental Programs Division
200 NE 21st Street
Oklahoma City, OK 73105

Prepared by:

Biologist Name	Renee' Ellis
Company/Agency Name	Triad Design Group
Address	3020 Northwest 149 th Street
City, State Zip	Oklahoma City, OK 73134

Report Date	February 6, 2017
Field Survey Date	January 11, 2017
Field Survey Biologist(s)	Renee' Ellis

1. PROJECT OVERVIEW

1.1 Federal Nexus

This biological assessment, prepared by the above named Company/Agency for the Oklahoma Department of Transportation (ODOT), addresses the above named project in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that, through consultation with the U.S. Fish and Wildlife Service (Service), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. This assessment evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the proposed project on listed species and designated critical habitat.

1.2. Project Description

Other - Interchange & Bridge

Description of the **existing** bridge/roadway facility and reason for proposed project

The Douglas Boulevard bridge (NBI # 15573) over I-40 is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft sidewalks on each side of the bridge. The bridge is a six-span, 80-ft wide concrete continuous slab bridge, with a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16-ft-9-in (eastbound) and 16-ft-4-in (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 47,980 vpd by the year 2045.

I-40 underneath Douglas Boulevard is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The current AADT on I-40 is 54,574 vpd, and is projected to increase to 84,580 vpd by the year 2045. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40.

The existing Engle Road bridge (NBI # 15560) over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists and the property is now owned by Tinker Air Force Base. Therefore, Engle Road bridge is closed to traffic and not in use.

The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes.

Description of **proposed** improvements

Three (3) interchange alternatives have been identified for consideration:

- Alternative 1 - Single Point Urban Interchange (SPUI). A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange

accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.

- Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover. A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.

- Alternative 3 - Cloverleaf Interchange. The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40.

Regardless of the interchange alternative selected, the Engle Road bridge over I-40, which is no longer in service, will be removed as a part of this project. Permanent new right-of-way is proposed in the SW quadrant of the interchange. The road will remain open to traffic during construction.

Current design plans depict fill line work extending into the water of an unnamed intermittent tributary to Soldier Creek (near NBI #15468). Additionally, mapped blue-line streams and ephemeral drainages revealing ordinary high water marks (OHWM) are present throughout the project extents of which the USACE may take jurisdiction. Therefore, in-water work is assumed.

Check if any of the following is expected as part of the proposed action

- | | |
|--|-------------------------------------|
| Work within OHWM is expected | <input checked="" type="checkbox"/> |
| Project is OFF-SET alignment <input type="checkbox"/> or NEW alignment | <input type="checkbox"/> |
| Project involves NO OFF EXISTING PAVEMENT work | <input type="checkbox"/> |
| Project requires new ROW (permanent &/or temporary) | <input checked="" type="checkbox"/> |
| Tree removal is expected <100' from edge of existing pavement | <input checked="" type="checkbox"/> |
| 100'-300' from edge of existing pavement | <input type="checkbox"/> |
| >300' from edge of existing pavement | <input type="checkbox"/> |

1.3. Project Area and Setting

Project Location		Environmental Study Footprint		Ecoregion & Game Type	
<u>Section Range & Township</u>	<u>Lat/Long NAD 83)</u>	<u>Dimensions</u>	<u>Acreage</u>	<u>Level IV Ecoregion (Woods et al. 2005)</u>	<u>Game Type (Duck and Fletcher 1943)</u>
S11, T11N, R2W; S12, T11N, R2W; S13, T11N, R2W; S14, T11N, R2W	Start: 35.4286158744419 N, -97.3616455893943 W End: 35.4349897230952 N, -97.3870720036987 W	75' east and west of Douglas Blvd south of I-40; 100' east and west of Douglas Blvd north of I-40; 200' north and south of I-40 mainline; dimensions widen in the interchange vicinity. Project length along Douglas Blvd is approximately 0.6 miles; project length along I-40 is approximately 1.5 miles.	112 Ac	Northern Cross Timbers	Post Oak - Blackjack Oak Forest

Action Area:

The Project's Action Area includes a 0.25 mile buffer of the NEPA Environmental Study Footprint to accommodate for potential species impacts.

2. FEDERALLY LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Species Range and Occurrence Evaluation (Check all that apply)

Species	IPaC ¹	Watershed ²	Water Body ³	Records ⁴
	Check if Yes	Check if YES	Check if Yes	Check if Yes
Whooping Crane	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Interior Least Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Piping Plover	<input checked="" type="checkbox"/>			<input type="checkbox"/>
Red Knot	<input checked="" type="checkbox"/>			<input type="checkbox"/>

¹Species is on the Proposed Project's IPaC List

²Action Area is within a watershed associated with occupied water bodies

³Action Area includes an occupied water body

⁴Project site within 5 miles of known records

Designated or Proposed Critical Habitat	Action Area includes Designated Critical Habitat (Check <input checked="" type="checkbox"/> if Yes)
Whooping Crane	<input type="checkbox"/>

IPaC Special Conditions Identified (wind energy projects or cell towers) for **Interior Least Terns**

IPaC Special Conditions Identified (wind energy projects or cell towers) for **Piping Plovers**

Action area is within which **Whooping Crane** migratory corridor percentage zone
10%

Action area is within 15 miles of Salt Plains NWR, Hackberry Flat, or Foss Reservoir.

3. ENVIRONMENTAL BASELINE

3.1. Ecological Processes and Conditions

Soils (Use Soil Map of Oklahoma by Carter and Gregory 2008)

FAR WESTERN PORTION OF STUDY AREA

Soil Class	Central Rolling Red Prairies
Soil Name	Renfrow-Kirkland-Grainola-Bethany
Soil Type	Mollisols; Alfisols
Soil Characteristics	Clayey and humus-rich soils on very gentle slopes (4%)

MAJORITY OF STUDY AREA

Soil Class	Northern Cross Timbers
Soil Name	Stephenville-Darnell-Niotaze
Soil Type	Alfisols; Inceptisols
Soil Characteristics	Shallow, sandy and loamy, moderately acid, and humus-poor soils on steep slopes (up to 18%)

Climate (Use Woods et al. 2005)

Precipitation	Mean annual inches	32-40
Growing Season	Number of days	190 - 220 days
Mean Temperatures	Summer min/max	68-94
	Winter min/max	29-55

River System

Unnamed tributaries to Soldier Creek

Land Use and Land Ownership

From Woods et al. 2005	Livestock farming is the main land use; cropland is less extensive than in the Central Great Plains and Central Irregular Plains, but rangeland is less widespread than in the Flint Hills.
From Field investigation	Upon site investigations, the current land use was characterized as predominantly urban with upland and riparian forest present in the eastern portion of the study area.

Terrestrial and Aquatic Community Descriptions (based on field site visit)

The majority of the study area was considered urban with forest dominating the eastern portion of the study area. Identification of the vegetation present within the project limits was limited due to the season in which the survey was conducted. Areas of right-of-way and urban areas consisted of mowed grasses. The intermittent tributaries to Soldier Creek exhibited normal hydrologic conditions for the time of year in which the survey was conducted. Midwest City has had approximately 26 inches of rainfall accumulation over the past 365 days, which is considered normal. All of the mapped intermittent streams had water present in the channel at the time of field survey. Common riparian zone species included the following vegetation: eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), sugarberry (*Celtis laevigata*), American elm (*Ulmus americana*), post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), black oak (*Q. velutina*), Osage orange (*Maclura pomifera*), sycamore (*Platanus occidentalis*), red cedar (*Juniperus virginiana*), privet (*Ligustrum* spp.), buttonbush (*Cephalanthus occidentalis*), poison ivy (*Rhus radicans*), greenbrier (*Smilax rotundifolia*), Canada wildrye (*Elymus canadensis*), brushy bluestem (*Andropogon glomeratus*), smartweed (*Polygonum* spp.), and horsetail (*Equisetum* sp.). Woody species such as post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), and red cedar (*Juniperus virginiana*) were present in the upland portions of forest. One shrub wetland was present within the study area along an intermittent stream channel. The dominant vegetation present was black willow (*Salix nigra*), buttonbush (*Cephalanthus occidentalis*), and horsetail (*Equisetum* sp.).

3.2 Species Habitat Analysis

Pedestrian survey of entire NEPA study footprint (including 300-foot work zone buffer in karst areas)

SPECIES	HABITAT	
Whooping Crane	Shallowly-submerged sandbars in large river channels occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>
	If within the 75% migration corridor, provide the number of acres of emergent wetlands that occur within the NEPA Environmental Study Footprint.	enter acres.
	Croplands suitable for foraging occur within the 0.25 miles of the NEPA Environmental Study Footprint and are within 15 miles of Salt Plains National Wildlife Refuge, Hackberry Flat, or Foss Reservoir.	<input type="checkbox"/>

SPECIES	HABITAT	
Interior Least Tern	Sparsely vegetated islands or sandbars along large rivers, with nearby areas of shallow water, occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>
Piping Plover	Sparsely vegetated sandy or gravelly shorelines and islands associated with the major river systems occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>
	Salt flats and mudflats associated with reservoirs occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>
Red Knot	Mudflats associated with reservoirs occur within the 0.25 miles of the NEPA Environmental Study Footprint.	<input type="checkbox"/>

4. ANALYSIS OF EFFECTS

4.1 Direct Effects

Species/ Resource	Habitat impacts expected from project activities	<u>Describe specific ACTIONS of the project and the results of those actions on species habitats, including indirect impacts to prey or improvements to habitat as a result of specific actions. If habitat within the action area identified above will not be impacted, describe why.</u>
None	<input type="checkbox"/>	

4.2 Indirect Effects

Long-term habitat alterations

Species/ Resource	<u>Identify long-term, permanent changes in habitat</u>
None	

Indirect land use impacts

No indirect changes in land use are anticipated as a result of this project.

4.3 Interrelated and Interdependent Actions and Activities

This project involves the replacement of an existing state highway bridge, reconstruction of interchange ramps and access roads, and widening of I-40 to accommodate traffic. Existing utilities will need to be relocated as a result of the proposed project.

USFWS TAILS Number:	02EKOK00-2017-SLI-0562
ODOT Project JP Number:	28992(04)

Species Conclusion Table (Check which apply)

SPECIES / DESIGNATED CRITICAL HABIT	CONCLUSION		ESA SECTION 7			NOTES AND DOCUMENTATION Check <input checked="" type="checkbox"/> all that apply			
	Species Habitat present within the action area	Project Activities expected to impact habitat	No Effect	May affect, unlikely to adversely affect	May affect, Likely to adversely affect	Field Studies	database review ¹	USFWS Review ²	Other ³
Interior Least Tern	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Whooping Crane	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Piping Plover	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red Knot	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹ONHI rare species / ABB

²USFWS occupied water bodies and associate watershed maps

³Whooping Crane Migration Corridor Map; LPC Habitat Model

CONCLUSIONS

No Effect	Interior Least Tern, Whooping Crane, Piping Plover, and Red Knot
May affect, unlikely to adversely affect	
May affect, likely to adversely affect	
Not likely to jeopardize the continued existence of the species – Candidate species only	

RECOMMENDED AVOIDANCE AND MINIMIZATION MEASURES

None required

5. BALD EAGLE AND SWALLOW ASSESSMENT

5.1. Bald Eagle Assessment

The Bald Eagle (*Haliaeetus leucocephalus*) is a large predatory bird protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Activities that would disturb eagles are prohibited under the Bald and Golden Eagle Protection Act. “Disturb” means to agitate an eagle to the degree that causes or is likely to (1) cause injury, (2) interfere with breeding, feeding or sheltering behavior, or (3) nest abandonment.

Bald Eagle Habitat Present	<input type="checkbox"/>	None
Bald Eagle Nests Observed	<input type="checkbox"/>	If box is checked, describe.
Bald Eagles Observed	<input type="checkbox"/>	If box is checked, describe.

5.2 Migratory Bird Assessment

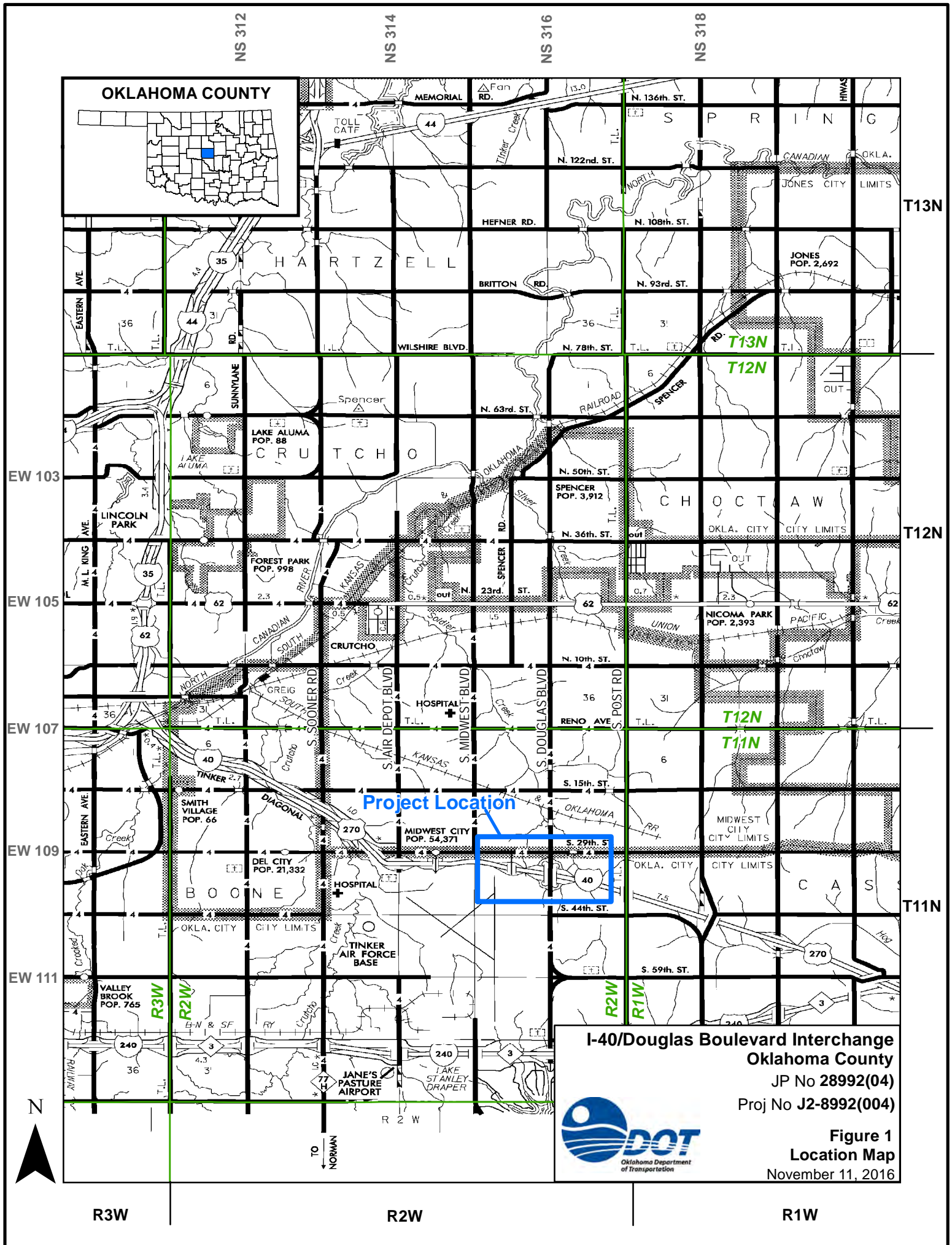
Cliff Swallows (*Petrochelidon pyrrhonota*) and Barn Swallows (*Hirundo rustica*) are small colonial and semi-colonial nesting birds protected by the federal Migratory Bird Treaty Act. Barn Swallows use man-made structures for nesting and live in close association with humans. Both species commonly use bridges and culverts in Oklahoma for nesting. Other migratory birds can also nest on transportation structures.

Structure Number or Location of <u>ALL</u> structures suitable for nesting within the NEPA footprint – regardless of whether being used by migratory birds or not.	Approximate Number of Cliff Swallow Nests	Approximate Number of Barn Swallow Nests
I-40 bridge (NBI #15468) associated with unnamed intermittent drainage (FS-1) east of Douglas Boulevard. (35.428924 N, -97.362476 W)	0	0
I-40 culvert associated with unnamed intermittent drainage (FS-4) east of Douglas Boulevard. (35.430521 N, -97.366963 W)	0	0
Douglas Boulevard bridge (NBI #15573). (35.431902 N, -97.370826 W)	0	0

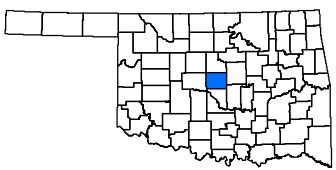
Structure Number or Location of <u>ALL</u> structures suitable for nesting within the NEPA footprint – regardless of whether being used by migratory birds or not.	Approximate Number of Cliff Swallow Nests	Approximate Number of Barn Swallow Nests
Engle Road bridge (NBI #15560). (35.433511 N, -97.375221 W)	0	0
I-40 culvert associated with unnamed intermittent drainage (FS-6) west of Douglas Boulevard. (35.434222 N, -97.377473 W)	0	0
Industrial Boulevard bridge (NBI #15559). (35.434448 N, -97.37905 W)	0	0
“A” Avenue bridge (NBI #15330). (35.435007 N, -97.386962 W)	0	0
Other MB Nests Observed on Transportation Structures	n/a	
<p>In order to avoid impacts to migratory birds, if structures are being used by these birds, any activities that may destroy active nests, eggs or birds shall be completed between September 1, and March 31, when nests are not occupied. If seasonal avoidance cannot be accomplished, structures shall be protected from new nest establishment prior to April 1, by means that do not result in death or injury to these birds.</p>		

6. REFERENCES:

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OKLAHOMA COUNTY



Project Location

I-40/Douglas Boulevard Interchange
Oklahoma County
 JP No 28992(04)
 Proj No J2-8992(004)



Figure 1
Location Map
 November 11, 2016

R3W

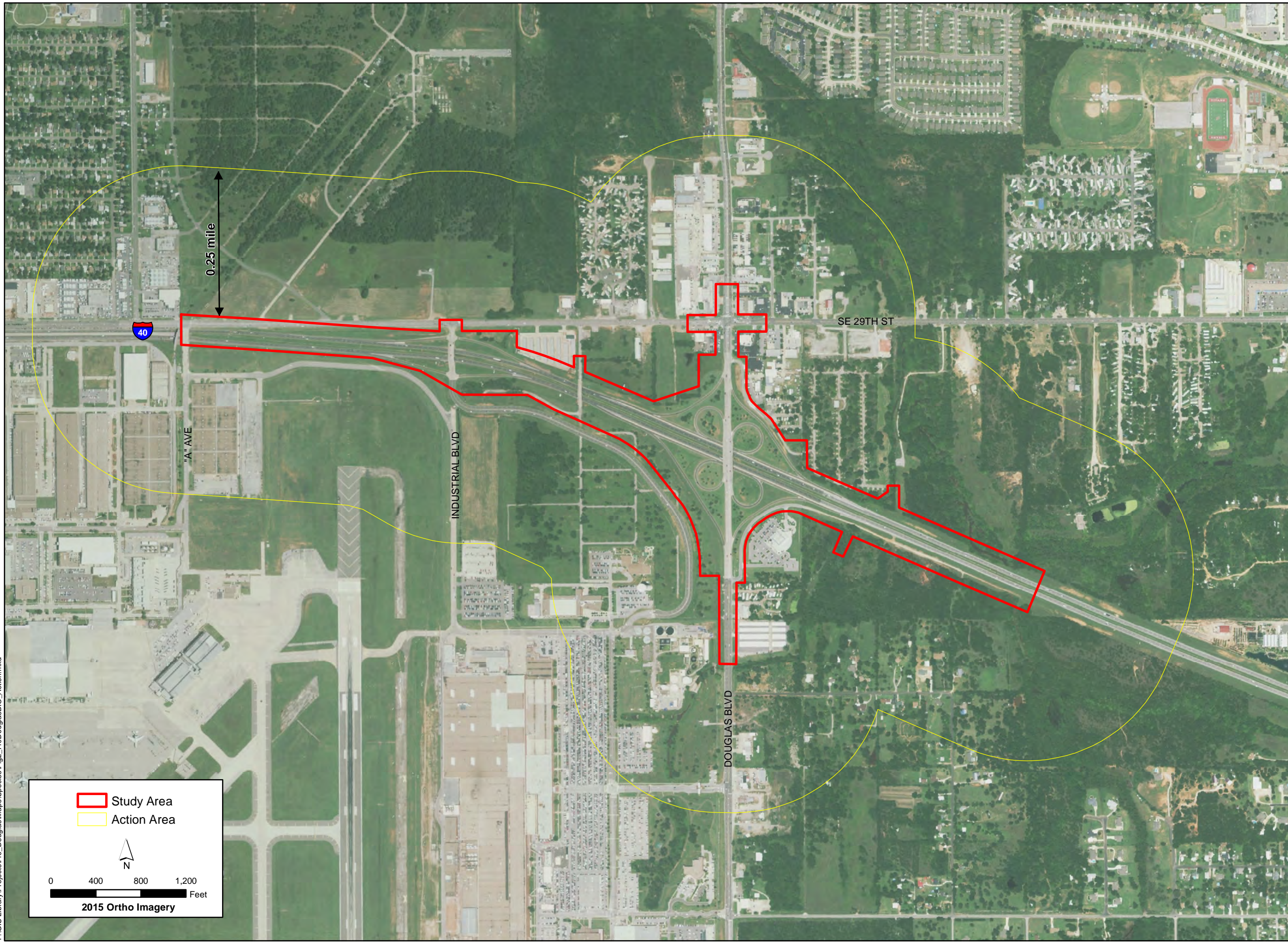
R2W

R1W



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Study Area
 Action Area

N

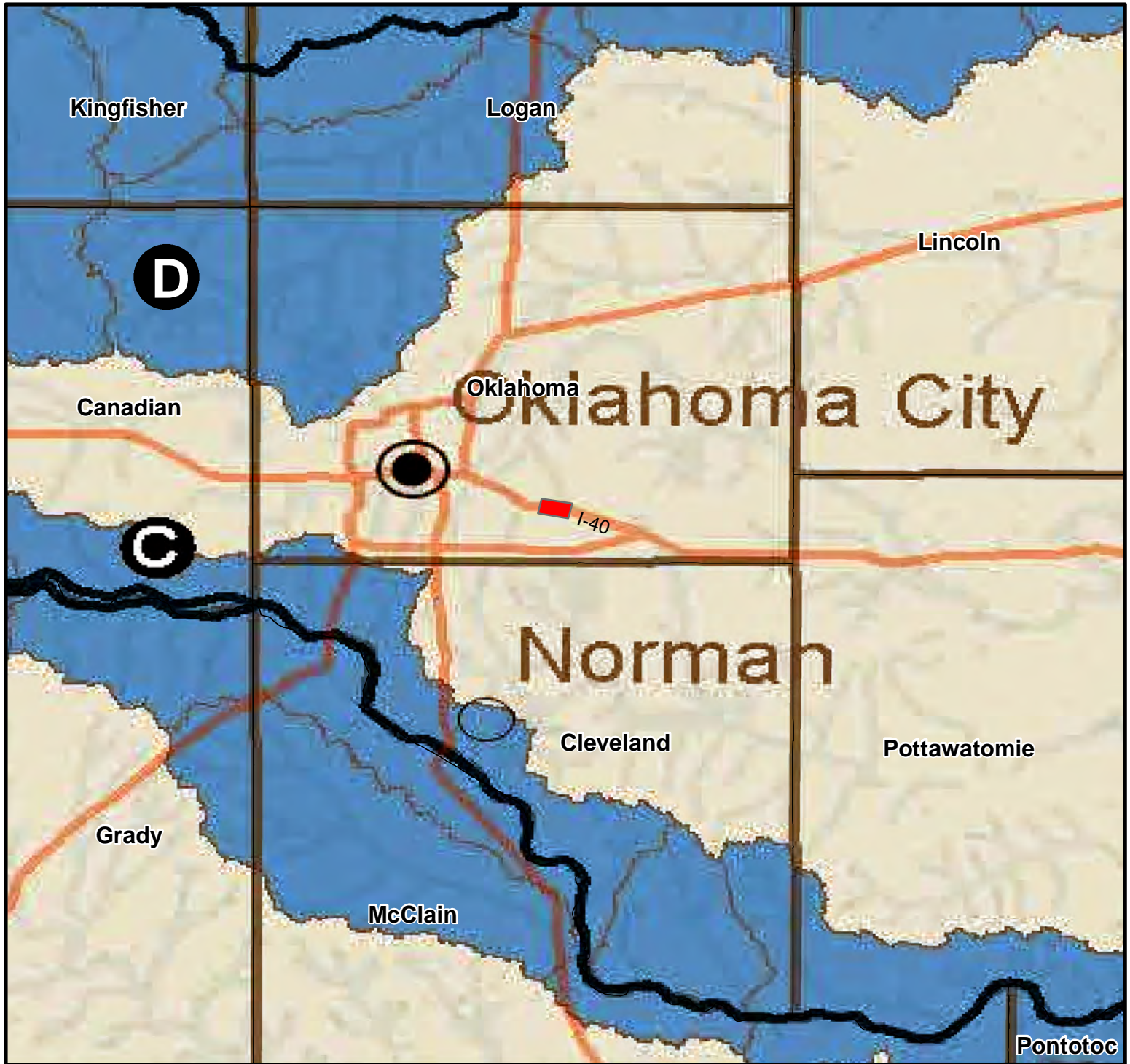
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 Feet

2015 Ortho Imagery

FIGURE TITLE	STUDY AREA AND ACTION AREA MAP FOR JP 28992 (04)
DOCUMENT TITLE	BIOLOGICAL ASSESSMENT - I-40 & DOUGLAS BOULEVARD INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	2/1/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER
2



StudyArea



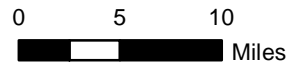
Interior Least Tern (Canadian River Watershed)



Interior Least Tern (Cimarron River Watershed)



N



UFSWS Federally-Listed Aquatic Dependent Species Watersheds of Oklahoma - April 2011

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FIGURE TITLE

FEDERALLY-LISTED WATERSHEDS FOR JP 28992(04)

DOCUMENT TITLE

BIOLOGICAL ASSESSMENT - I-40 & DOUGLAS BLVD INTERCHANGE

CLIENT

OKLAHOMA DEPARTMENT OF TRANSPORTATION

LOCATION

OKLAHOMA COUNTY, OKLAHOMA

DATE 1/3/2017

SCALE AS SHOWN

DESIGNED BY TS

APPROVED BY RE

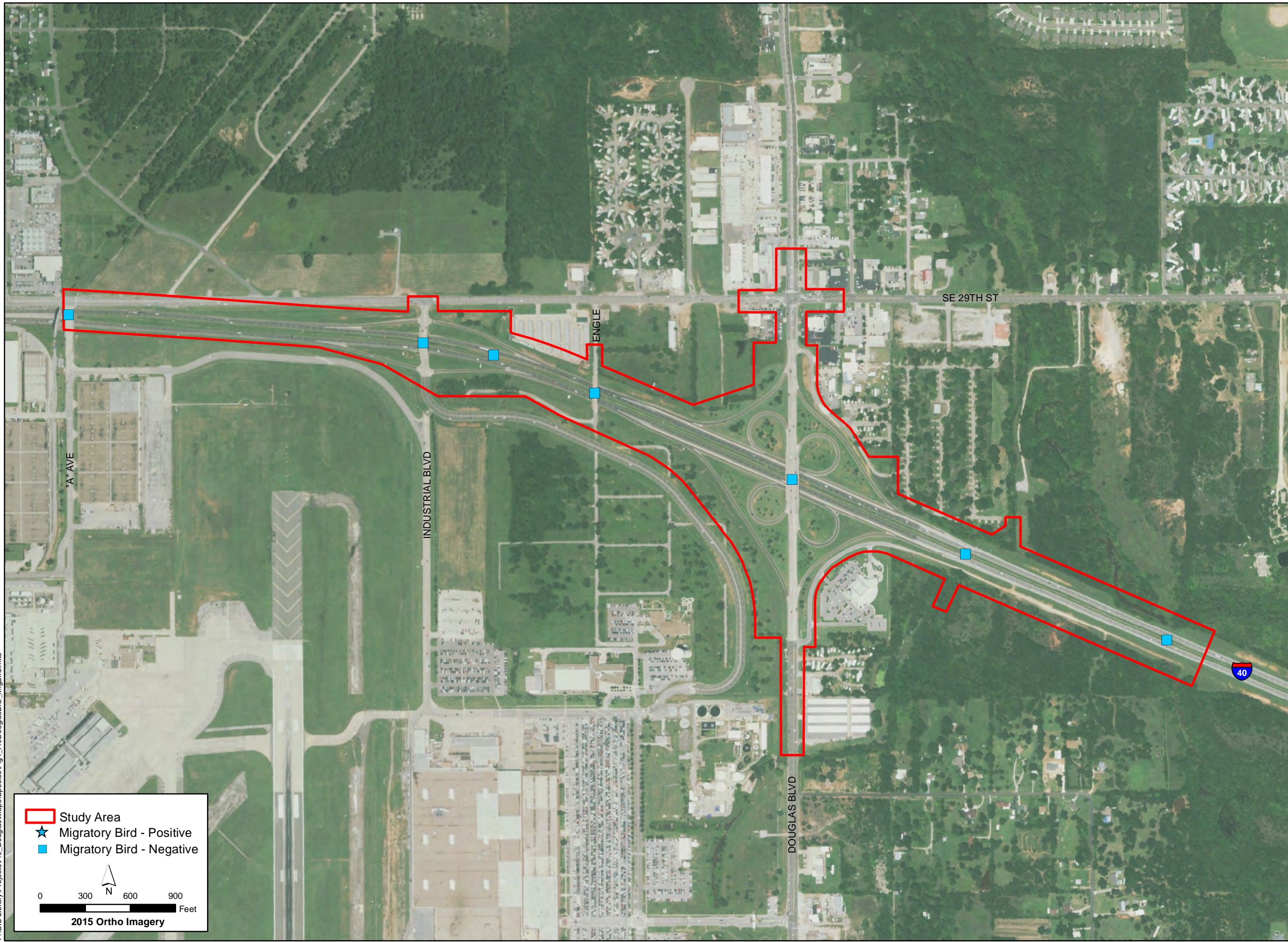
DRAWN BY RE

FIGURE NUMBER

3

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Study Area
★ Migratory Bird - Positive
■ Migratory Bird - Negative

0 300 600 900
 Feet
 2015 Ortho Imagery

FIGURE TITLE	MIGRATORY BIRD LOCATIONS FOR JP 28992 (04)
DOCUMENT TITLE	BIOLOGICAL ASSESSMENT - I-40 & DOUGLAS BOULEVARD INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	2/1/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER	4
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F:\GIS Library\Projects\I40_Douglas\Maps\Species\Fig4_I40DouglasBIO_MigBird.mxd

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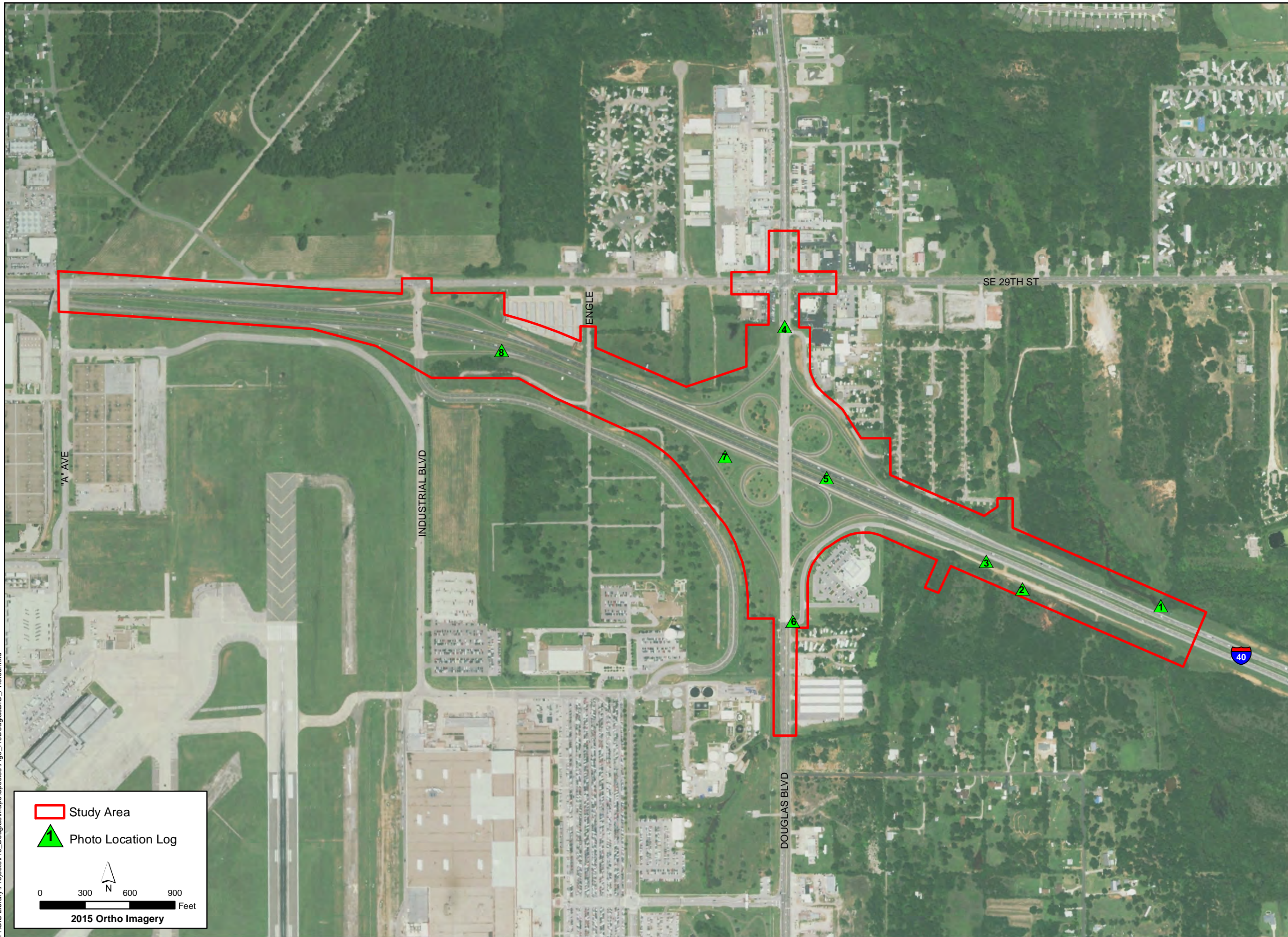


FIGURE TITLE

PHOTO LOG FOR JP 28992 (04)

DOCUMENT TITLE

BIOLOGICAL ASSESSMENT - I-40 & DOUGLAS BOULEVARD INTERCHANGE

CLIENT

OKLAHOMA DEPARTMENT OF TRANSPORTATION

LOCATION

OKLAHOMA COUNTY, OKLAHOMA

DATE	2/1/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER

5

- Study Area
- ▲ Photo Location Log

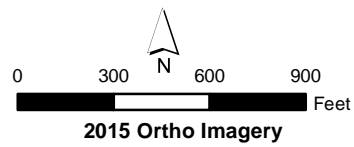




Photo 1: Typical drainage (FS-1) found in project area.
View from north of I-40 facing northwest.



Photo 2: Upland Area. View facing southeast.



Photo 3: View from south of I-40 facing northwest.



Photo 4: View from Douglas Blvd facing north towards SE 29th St.



Photo 5: View from I-40 facing westward towards Douglas Blvd Bridge.



Photo 6: View from Douglas Blvd facing southward.



Photo 7: View facing eastward towards Douglas Blvd Bridge.



Photo 8: View of Engle St. bridge from I-40 facing eastward.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oklahoma Ecological Services Field Office
9014 EAST 21ST STREET
TULSA, OK 74129
PHONE: (918)581-7458 FAX: (918)581-7467
URL: www.fws.gov/southwest/es/Oklahoma/

Consultation Code: 02EKOK00-2017-SLI-0562

December 12, 2016

Event Code: 02EKOK00-2017-E-00729

Project Name: I-40 & Douglas Interchange - JP 28992

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Non-federal entities conducting activities that may result in take of listed species should consider seeking coverage under section 10 of the ESA, either through development of a Habitat Conservation Plan (HCP) or, by becoming a signatory to the General Conservation Plan (GCP) currently under development for the American burying beetle. Each of these mechanisms provides the means for obtaining a permit and coverage for incidental take of listed species during otherwise lawful activities.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit through our Project Review step-wise process <http://www.fws.gov/southwest/es/oklahoma/OKESFO%20Permit%20Home.htm>.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Official Species List

Provided by:

Oklahoma Ecological Services Field Office

9014 EAST 21ST STREET

TULSA, OK 74129

(918) 581-7458

<http://www.fws.gov/southwest/es/Oklahoma/>

Consultation Code: 02EKOK00-2017-SLI-0562

Event Code: 02EKOK00-2017-E-00729

Project Type: TRANSPORTATION

Project Name: I-40 & Douglas Interchange - JP 28992

Project Description: I-40 & Douglas Interchange

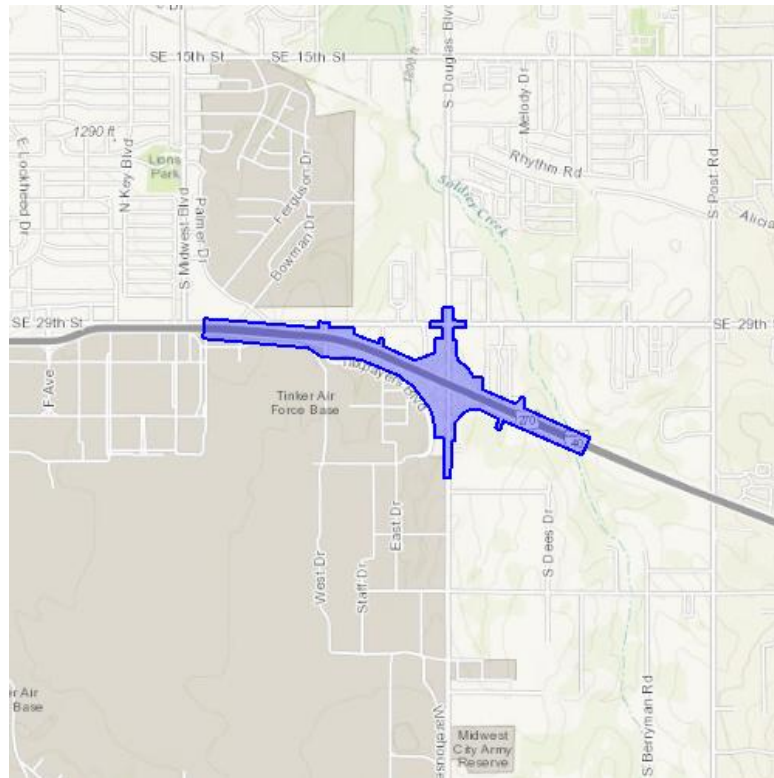
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Oklahoma, OK



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Endangered Species Act Species List

There are a total of 4 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Least tern (<i>Sterna antillarum</i>) Population: interior pop.	Endangered		Towers (i.e. radio, television, cellular, microwave, meteorological) Wind Turbines and Wind Farms
Piping Plover (<i>Charadrius melodus</i>) Population: except Great Lakes watershed	Threatened	Final designated	
Red Knot (<i>Calidris canutus rufa</i>) Population: Wherever found	Threatened		
Whooping crane (<i>Grus americana</i>) Population: Wherever found, except where listed as an experimental population	Endangered	Final designated	



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Critical habitats that lie within your project area

There are no critical habitats within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Appendix A: FWS National Wildlife Refuges and Fish Hatcheries

There are no refuges or fish hatcheries within your project area.



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Appendix B: FWS Migratory Birds

The protection of birds is regulated by the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). The MBTA has no otherwise lawful activities. For more information regarding these Acts see: <http://www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php>
<http://www.fws.gov/birds/policies-and-regulations/laws-legislations/bald-and-golden-eagle-protection-act.php>

All project proponents are responsible for complying with the appropriate regulations protecting birds when planning and developing a project. To meet these conservation obligations, proponents should identify potential or existing project-related impacts to migratory birds and their habitat and develop and implement conservation measures that avoid, minimize, or compensate for these impacts. The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

For information about Birds of Conservation Concern, go to:

<http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>

For information about conservation measures that help avoid or minimize impacts to birds, please visit:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

To search and view summaries of year-round bird occurrence data within your project area, go to the Avian Knowledge Network Histogram Tools at:

<http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/akn-histogram-tools.php>



United States Department of Interior
Fish and Wildlife Service

Project name: I-40 & Douglas Interchange - JP 28992

Migratory birds that may be affected by your project:

There are 24 birds on your migratory bird list. The list may include birds occurring outside this FWS office jurisdiction.

Species Name	Bird of Conservation Concern (BCC)	Seasonal Occurrence in Project Area
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Yes	Wintering
Bell's Vireo (<i>Vireo bellii</i>)	Yes	Breeding
Chestnut-collared Longspur (<i>Calcarius ornatus</i>)	Yes	Wintering
Dickcissel (<i>Spiza americana</i>)	Yes	Breeding
Fox Sparrow (<i>Passerella iliaca</i>)	Yes	Wintering
Golden eagle (<i>Aquila chrysaetos</i>)	Yes	Wintering
Harris's Sparrow (<i>Zonotrichia querula</i>)	Yes	Wintering
Hudsonian Godwit (<i>Limosa haemastica</i>)	Yes	Migrating
Lark Bunting (<i>Calamospiza melanocorys</i>)	Yes	Breeding
Lewis's Woodpecker (<i>Melanerpes lewis</i>)	Yes	Wintering
Little Blue Heron (<i>Egretta caerulea</i>)	Yes	Breeding
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Yes	Year-round
Long-Billed curlew (<i>Numenius americanus</i>)	Yes	Breeding
Mississippi Kite (<i>Ictinia mississippiensis</i>)	Yes	Breeding
Orchard Oriole (<i>Icterus spurius</i>)	Yes	Breeding



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Painted Bunting (<i>Passerina ciris</i>)	Yes	Breeding
Prothonotary Warbler (<i>Protonotaria citrea</i>)	Yes	Breeding
Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>)	Yes	Year-round
Rufous-crowned Sparrow (<i>Aimophila ruficeps</i>)	Yes	Year-round
Rusty Blackbird (<i>Euphagus carolinus</i>)	Yes	Wintering
Scissor-tailed Flycatcher (<i>Tyrannus forficatus</i>)	Yes	Breeding
Short-eared Owl (<i>Asio flammeus</i>)	Yes	Wintering
Sprague's Pipit (<i>Anthus spragueii</i>)	Yes	Wintering
Swainson's hawk (<i>Buteo swainsoni</i>)	Yes	Breeding



United States Department of Interior
Fish and Wildlife Service

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Appendix C: NWI Wetlands

Wetlands data for your project area was not available at the time of this species list request.

WATERS AND WETLANDS EVALUATION REPORT

For I-40 & Douglas Boulevard Interchange

County	Oklahoma	JP Number	28992(04)	Project Number	J2-8992(004)
Road Number	I-40	Water Body Name		Unnamed tributaries to Soldier Creek	
ROW Date		Let Date		Project Length	Apx. 1.5 miles along I-40; Apx. 0.6 miles along Douglas Blvd
Project General Location		I-40 and Douglas Boulevard interchange in Midwest City, 6.5 miles east of I-35			
Project Statement		I-40 and Douglas Boulevard bridge and interchange (including removal of Engle Rd. bridge)			

Prepared for:
 Oklahoma Department of Transportation
 Environmental Programs Division
 200 NE 21st Street
 Oklahoma City, OK 73105

Prepared by:

Biologist Name	Renee' Ellis
Company/Agency Name	Triad Design Group
Address	3020 Northwest 149 th Street
City, State Zip	Oklahoma City, OK 73134

Report Date:	February 2017
Field Date:	January 11, 2017

PROJECT OVERVIEW

Project Type (Choose one)	Check ✓
Bridge and Approaches or bridge widening/structure extension	
Grade, Drain, Surface and Bridge	
Grade, Drain and Surface	
Asphalt Overlay Resurfacing	
Widen and Resurface existing lanes	
Pavement Reconstruction or rehabilitation	
Bridge Rehabilitation	
Safety Improvements (Cable Barrier, Guardrail, signage)	
Intersection Modifications	
Safe Routes to School (Describe)	
Enhancements (Describe)	
Other (Describe) Interchange & Bridge	✓

Description of the **existing** bridge/roadway

The Douglas Boulevard bridge (NBI # 15573) over I-40 is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft sidewalks on each side of the bridge. The bridge is a six-span, 80-ft wide concrete continuous slab bridge, with a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16-ft-9-in (eastbound) and 16-ft-4-in (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 47,980 vpd by the year 2045.

I-40 underneath Douglas Boulevard is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The current AADT on I-40 is 54,574 vpd, and is projected to increase to 84,580 vpd by the year 2045. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40.

The existing Engle Road bridge (NBI # 15560) over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists and the property is now owned by Tinker Air Force Base. Therefore, Engle Road bridge is closed to traffic and not in use.

The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes.

Description of proposed improvements SPECIFIC TO THIS PROJECT

Three (3) interchange alternatives have been identified for consideration:

- **Alternative 1 - Single Point Urban Interchange (SPUI).** A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- **Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover.** A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed.
- **Alternative 3 - Cloverleaf Interchange.** The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40.

Regardless of the interchange alternative selected, the Engle Road bridge over I-40, which is no longer in service, will be removed as a part of this project. Permanent new right-of-way is proposed in the SW quadrant of the interchange. The road will remain open to traffic during construction.

Current design plans depict fill line work extending into the water of an unnamed intermittent tributary to Soldier Creek (near NBI #15468). Additionally, mapped blue-line streams and ephemeral drainages revealing ordinary high water marks (OHWM) are present throughout the project extents of which the USACE may take jurisdiction. Therefore, in-water work is assumed.

Project Environmental Study Footprint

Project Location		Environmental Study Footprint	
<u>Section Range & Township</u>	<u>Lat/Long (NAD 83)</u>	<u>Dimensions</u>	<u>Acreage</u>
S11, T11N, R2W S12, T11N, R2W S13, T11N, R2W S14, T11N, R2W	Start: 35.4286158744419 N, -97.3616455893943 W End: 35.4349897230952 N, -97.3870720036987 W	75' east and west of Douglas Blvd south of I-40; 100' east and west of Douglas Blvd north of I-40; 200' north and south of I-40 mainline; dimensions widen in the interchange vicinity. Project length along Douglas Blvd is approximately 0.6 miles; project length along I-40 is approximately 1.5 miles.	112 Ac

Environmental Study Footprint Soils (NRCS Soil Survey Map)

Map Unit Name	Percent Slope	Drainage Class	Hydric Rating		Description
			YES	NO	
Ashport silt loam (AstA)	0-1%	Well drained		X	Frequently flooded
Harrah fine sandy loam (HarC)	3-5%	Well drained		X	
Harrah fine sandy loam (HarG)	3-45%	Well drained		X	
Harrah-Urban land (HaUC)	3-5%	Well drained		X	
Latrass loam (LatG)	1-45%	Well drained		X	
Littleaxe-Urban land Complex (LtUC)	1-5%	Well drained		X	
Renthin-Urban land Complex (RnUC)	1-5%	Well drained		X	
Stephenville-Darsil-Gullied land complex (SDGD4)	3-8%	Well drained		X	
Stephenville-Darsil-Newalla complex (SDND)	3-8%	Well drained		X	
Stephenville-Urban land-Newalla complex (SUND)	1-8%	Well drained		X	
Tribbey fine sandy loam (TriA)	0-1%	Somewhat poorly drained		X	Frequently flooded
Urban land (URB)	-	-		X	

Environmental Study Footprint General Description and Vegetation Present

The field survey was conducted by Triad personnel on January 11, 2017. The majority of the study area was considered urban with forest dominating the eastern portion of the study area. Identification of the vegetation present within the project limits was limited due to the season in which the survey was conducted. Areas of right-of-way and urban areas consisted of mowed grasses. The intermittent tributaries to Soldier Creek exhibited normal hydrologic conditions for the time of year in which the survey was conducted. Midwest City has had approximately 26 inches of rainfall accumulation over the past 365 days, which is considered normal. All of the mapped intermittent streams had water present in the channel at the time of field survey. Common riparian zone species included the following vegetation: eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), sugarberry (*Celtis laevigata*), American elm (*Ulmus americana*), post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), black oak (*Q. velutina*), Osage orange (*Maclura pomifera*), sycamore (*Platanus occidentalis*), red cedar (*Juniperus virginiana*), privet (*Ligustrum* spp.), buttonbush (*Cephalanthus occidentalis*), poison ivy (*Rhus radicans*), greenbrier (*Smilax rotundifolia*), Canada wildrye (*Elymus canadensis*), brushy bluestem (*Andropogon glomeratus*), smartweed (*Polygonum* spp.), and horsetail (*Equisetum* sp.). Woody species such as post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), and red cedar (*Juniperus virginiana*) were present in the upland portions of forest. One shrub wetland was present within the study area along an intermittent stream channel. The dominant vegetation present was black willow (*Salix nigra*), buttonbush (*Cephalanthus occidentalis*), and horsetail (*Equisetum* sp.).

WATERS AND WETLANDS EVALUATION

Data Sources Reviewed (list)

USGS 7.5 minute Quad	NWI Map	USACE Wetland Regional Supplement	Additional Resources Reviewed
Midwest City & Choctaw, OK	US Fish & Wildlife Service: "CONUS_wet_poly" vector digital data	Great Plains Region - Southwestern Prairies subregion (LRR J)	National List of Plant Species that Occur in Wetlands: - Region 6: South Plains

Wetlands and Ponds Summary Table

Field Sites	Type of Wetland or Pond	Cowardin Classification	Potential Jurisdictional Status	Acres within Environmental Study Footprint
FS-3	Shrub Wetland	PSS1E	Likely	0.03

Streams and Drainages Summary Table

Field Sites	Stream Name	USGS Mapped Status	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
FS-1	Intermittent Drainage to Soldier Creek	Mapped Intermittent	Likely	0.45	790

Field Sites	Stream Name	USGS Mapped Status	Potential Jurisdictional Status	Acres within Environmental Study Footprint	Linear Feet within Environmental Study Footprint
FS-2	Intermittent Drainage to Soldier Creek	Mapped Intermittent	Likely	0.02	113
FS-4	Intermittent Drainage to Soldier Creek	Mapped Intermittent	Likely	0.37	913
FS-5	Ephemeral Drainage to Soldier Creek	Not Mapped	Likely	0.05	485
FS-6	Intermittent Drainage to Soldier Creek	Mapped Intermittent	Likely	0.11	904

Streams and other linear aquatic features

Field Site 1: Intermittent Drainage to Soldier Creek (NBI #15468)

This unnamed intermittent drainage is located at the eastern boundary of the study area. The drainage enters the study area south of I-40 and flows northwest, crossing I-40 until it exits the study area north of I-40. Hydrology appears to be obtained from groundwater. The riparian canopy surrounding the area consisted of American elm, sycamore, and sugarberry trees and saplings. The estimated ordinary high water marks ranged from approximately 20 to 30 feet wide. Approximately 790 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.45 acre. Site photographs are included in **Appendix A**. The drainage is mapped as an intermittent drainage on the US Geological Survey (USGS) 7.5-Minute Topographic Map and Site Map (**Figures 2 and 5-A**). This drainage is likely to be considered jurisdictional because it meets the definition of a) a stream and b) “waters of the state, tribe or the United States.”

Field Site 2: Intermittent Drainage to Soldier Creek

This unnamed intermittent drainage is located at the eastern boundary of the study area, north of I-40. The drainage flows westward into the drainage noted as FS-1. Hydrology appears to be obtained from groundwater. The riparian canopy surrounding the area consisted of sycamore, American elm, and sugarberry trees and saplings. The estimated ordinary high water marks ranged from approximately 4 to 8 feet wide. Approximately 113 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.02 acre. Site photographs are included in **Appendix A**. The drainage is mapped as an intermittent drainage on the US Geological Survey (USGS) 7.5-Minute Topographic Map and Site Map (**Figures 2 and 5-A**). This drainage is likely to be considered jurisdictional because it meets the definition of a) a stream and b) “waters of the state, tribe or the United States.”

Field Site 4: Intermittent Drainage to Soldier Creek

This unnamed intermittent drainage is located east of Douglas Boulevard and west of the drainage noted as FS-1. The drainage enters the study area south of I-40 and flows northeast, crossing I-40 until it exits the study area north of I-40. Hydrology appears to be obtained from groundwater. The riparian canopy surrounding the area consisted of American elm, sycamore, and sugarberry trees and saplings. The

estimated ordinary high water marks ranged from approximately 15 to 20 feet wide. Approximately 913 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.37 acre. Site photographs are included in **Appendix A**. The drainage is mapped as an intermittent drainage on the US Geological Survey (USGS) 7.5-Minute Topographic Map and Site Map (**Figures 2 and 5-A**). This drainage is likely to be considered jurisdictional because it meets the definition of a) a stream and b) “waters of the state, tribe or the United States.”

Field Site 5: Ephemeral Drainage to Soldier Creek

This unnamed drainage is located east of Douglas Boulevard and north of I-40. The drainage flows eastward until its confluence with FS-4. No water was present in the channel at the time of survey; hydrology is likely obtained from sheet-flow and roadway run-off. This site is displayed in the site photographs and identified on the site map as FS-5 (**Appendix A and Figure 5-A**). The canopy surrounding the area consisted of American elm, Osage-orange, post oak, blackjack oak, and red cedar trees and saplings. The estimated ordinary high water marks ranged from approximately 3 to 5 feet wide. Approximately 485 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.05 acre. The drainage was not mapped on the US Geological Survey (USGS) 7.5-Minute Topographic Map (**Figure 2**). This drainage is likely to be considered jurisdictional because it meets the definition of a) a stream and b) “waters of the state, tribe or the United States.” Non-Relatively Permanent Waters (RPW) are jurisdictional under the Clean Water Act (CWA) where there is a “significant nexus” with a Traditional Navigable Water (TNW). For each specific request for non-RPWs, USACE field staff will need to perform significant nexus evaluation to determine if tributary is jurisdictional under the CWA.

Field Site 6: Intermittent Drainage to Soldier Creek

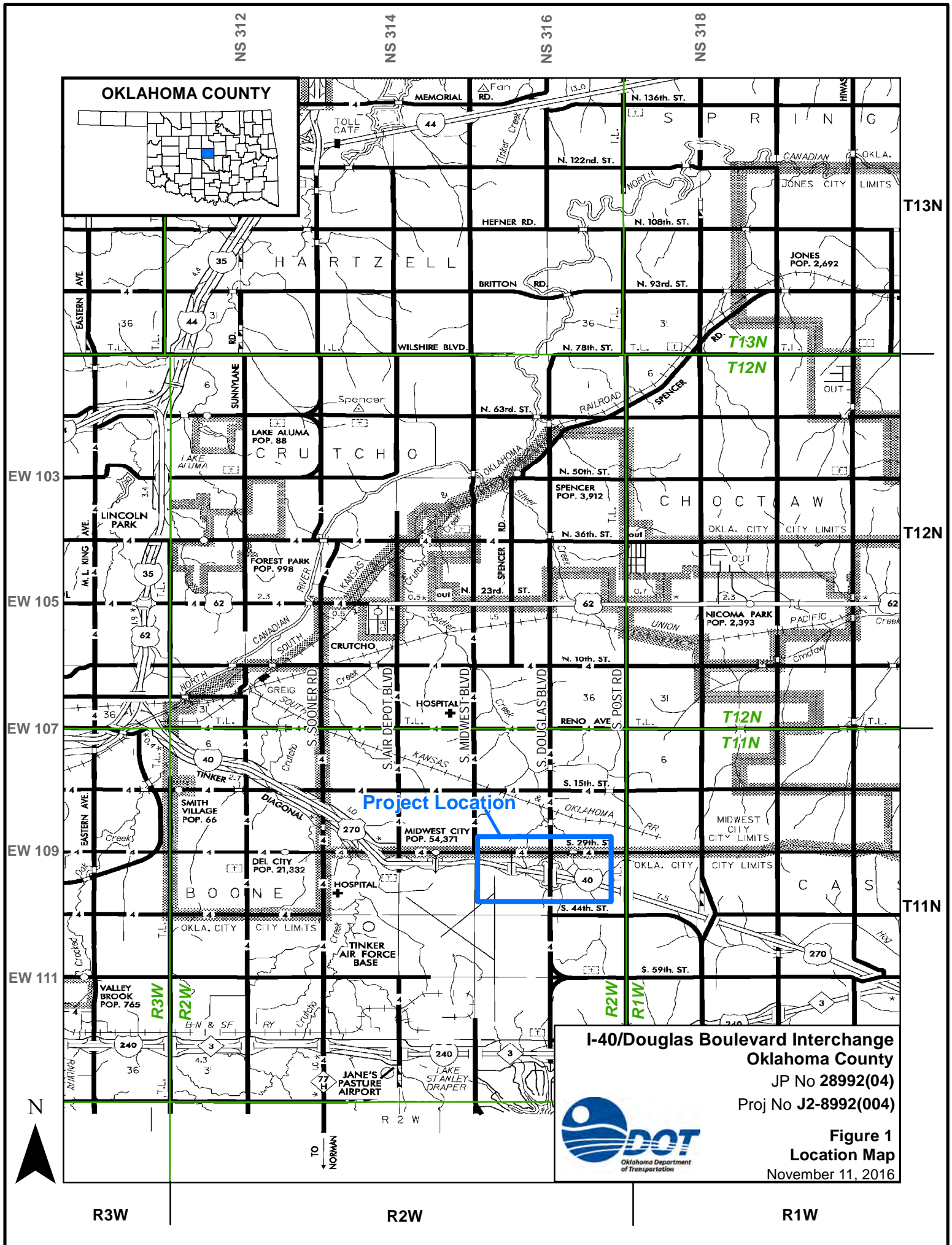
This unnamed intermittent drainage is located west of Douglas Boulevard adjacent to Tinker Air Force Base (AFB). It appears that a portion of this drainage south of I-40 has been previously altered from its historical pattern due to development of the AFB. The drainage enters the study area south of I-40 and flows northeast, crossing I-40 until it exits the study area north of I-40. Hydrology appears to be obtained from groundwater. The riparian canopy surrounding the area consisted of American elm, cottonwood, black willow, and red cedar trees and privet shrubs. The estimated ordinary high water marks ranged from approximately 4 to 7 feet wide. Approximately 904 linear feet of the channel is located within the environmental study limits. The estimated total area of disturbance associated with this drainage is approximately 0.11 acre. Site photographs are included in **Appendix A**. The drainage is mapped as an intermittent drainage on the US Geological Survey (USGS) 7.5-Minute Topographic Map and Site Map (**Figures 2 and 5-B**). This drainage is likely to be considered jurisdictional because it meets the definition of a) a stream and b) “waters of the state, tribe or the United States.”

Wetlands and ponds

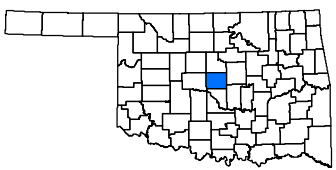
Field Site 3: Shrub Wetland

(0.03 acre) This wetland is located south of I-40 adjacent to the drainage noted as FS-1. This site is displayed in the site photographs and identified on the site map as FS-3 (**Appendix A and Figure 5-A**). This area is not recorded on the NWI mapping (**Figure 4**). The observed dominant species were buttonbush, black willow, and horsetail. The soil was mapped as Tribbey fine sandy loam (TriA). Hydric soils were confirmed by the matrix coloration of 5YR 3/2 with redox concentrations of 5YR 4/3 from 2-8+ inches. The soils were classified as loamy clay. Hydric soil indicator F6 – Redox Dark Surface is met. Wetland hydrology is evidenced by oxidized rhizospheres living on roots and drainage patterns. This wetland is classified as PSS1E (palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded/saturated),

following the Cowardin classification system. This site is likely jurisdictional because it meets the definition of a wetland pursuant to the USACE and Section 404 of the Clean Water Act and exhibits a continuous surface connection to a relatively permanent 'waters of the United States'.



OKLAHOMA COUNTY



Project Location

I-40/Douglas Boulevard Interchange
Oklahoma County
 JP No 28992(04)
 Proj No J2-8992(004)



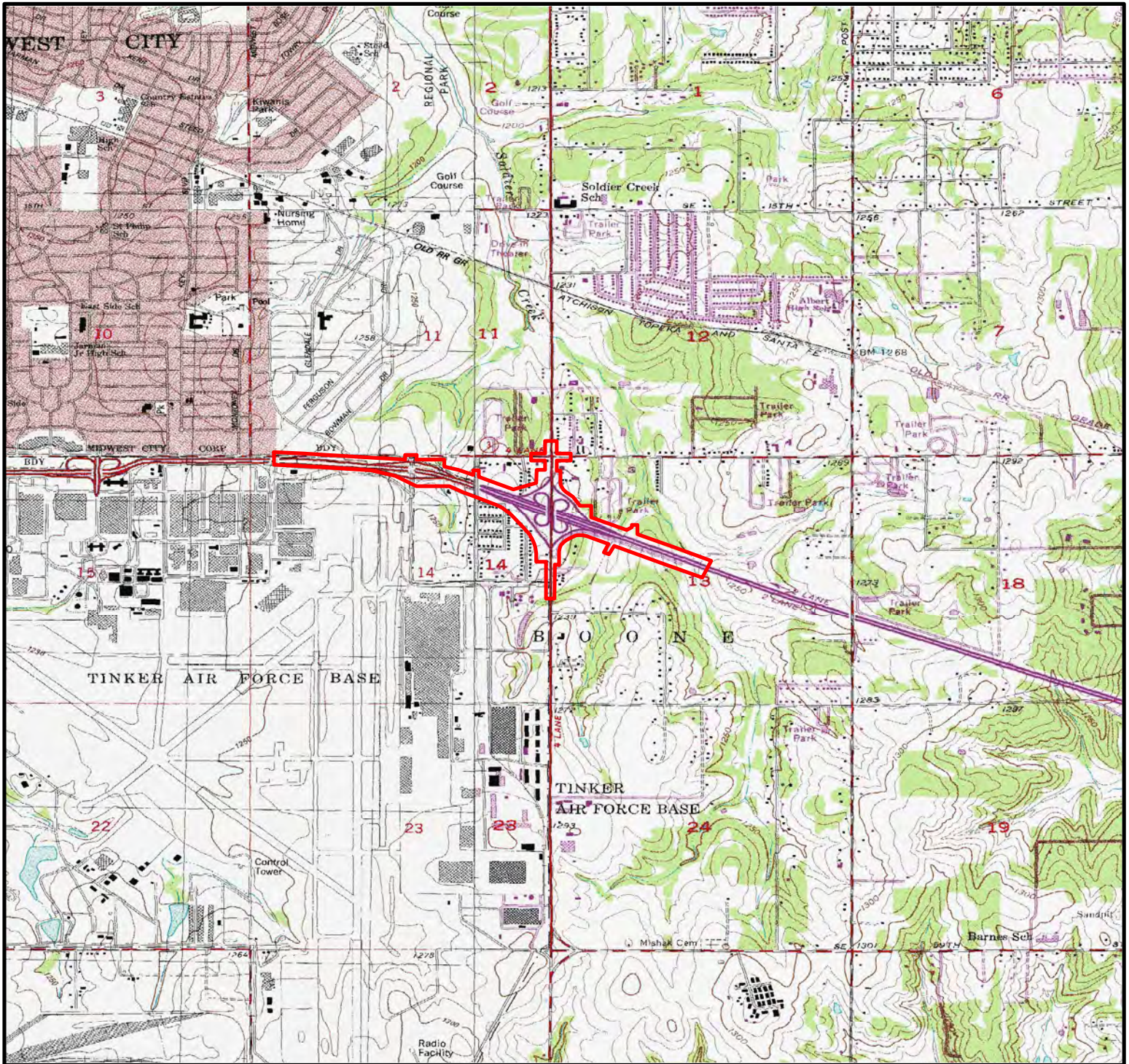
Figure 1
Location Map
 November 11, 2016


R3W

R2W

R1W






 Study Area

USGS 7.5 Minute Quadrangles at 1:24,000 scale
Midwest City & Choctaw, Oklahoma

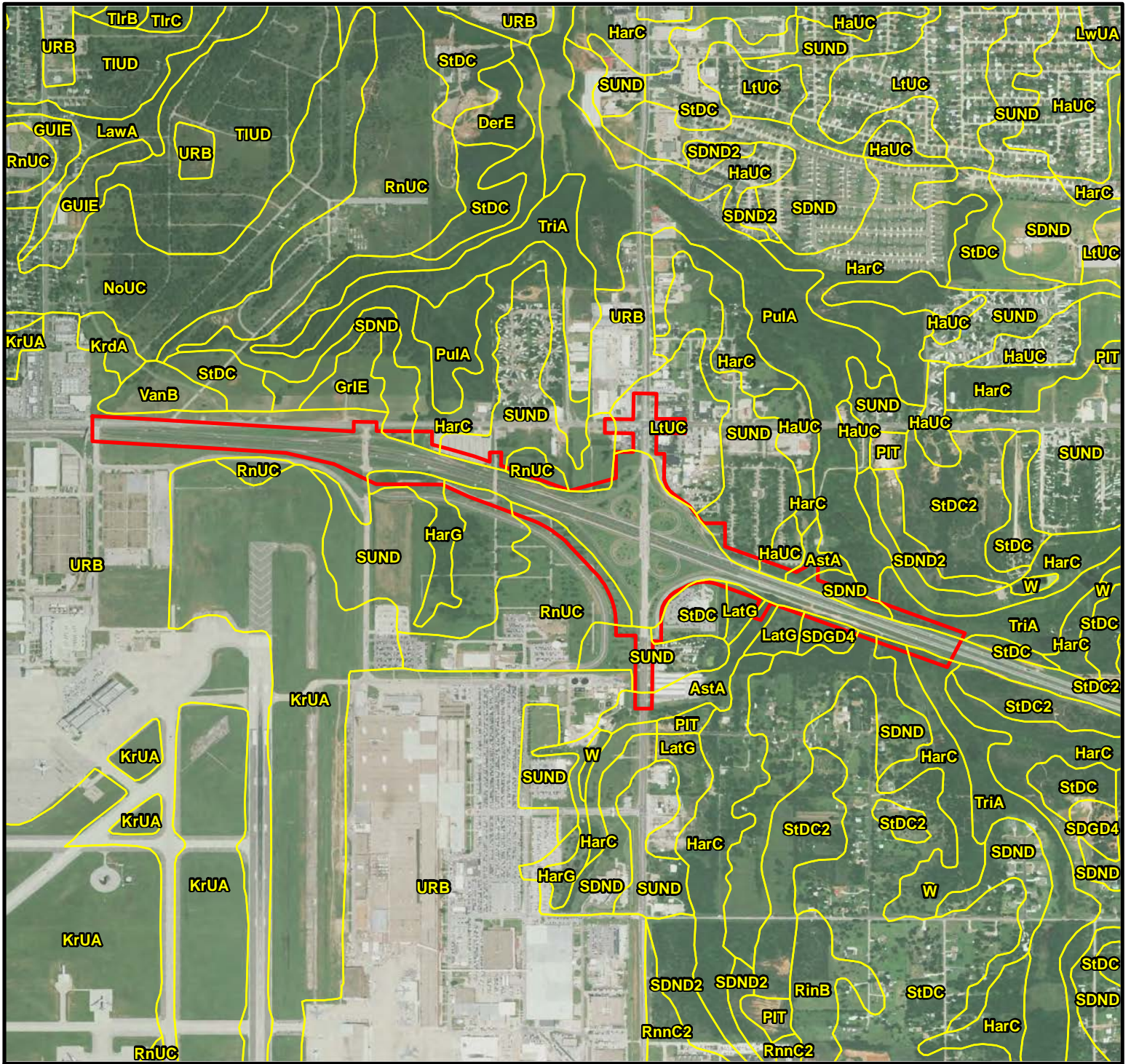


0 2,000 4,000
 Feet

Triad Design Group

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE	DATE	1/5/2017
TOPOGRAPHIC MAP FOR JP 28992(04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
WATERS AND WETLANDS EVALUATION, I-40/DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
Oklahoma Department of Transportation	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	2
Oklahoma County, Oklahoma		



- NRCS Soils
- Study Area

2015 SSURGO 2.2
2015 Ortho Imagery

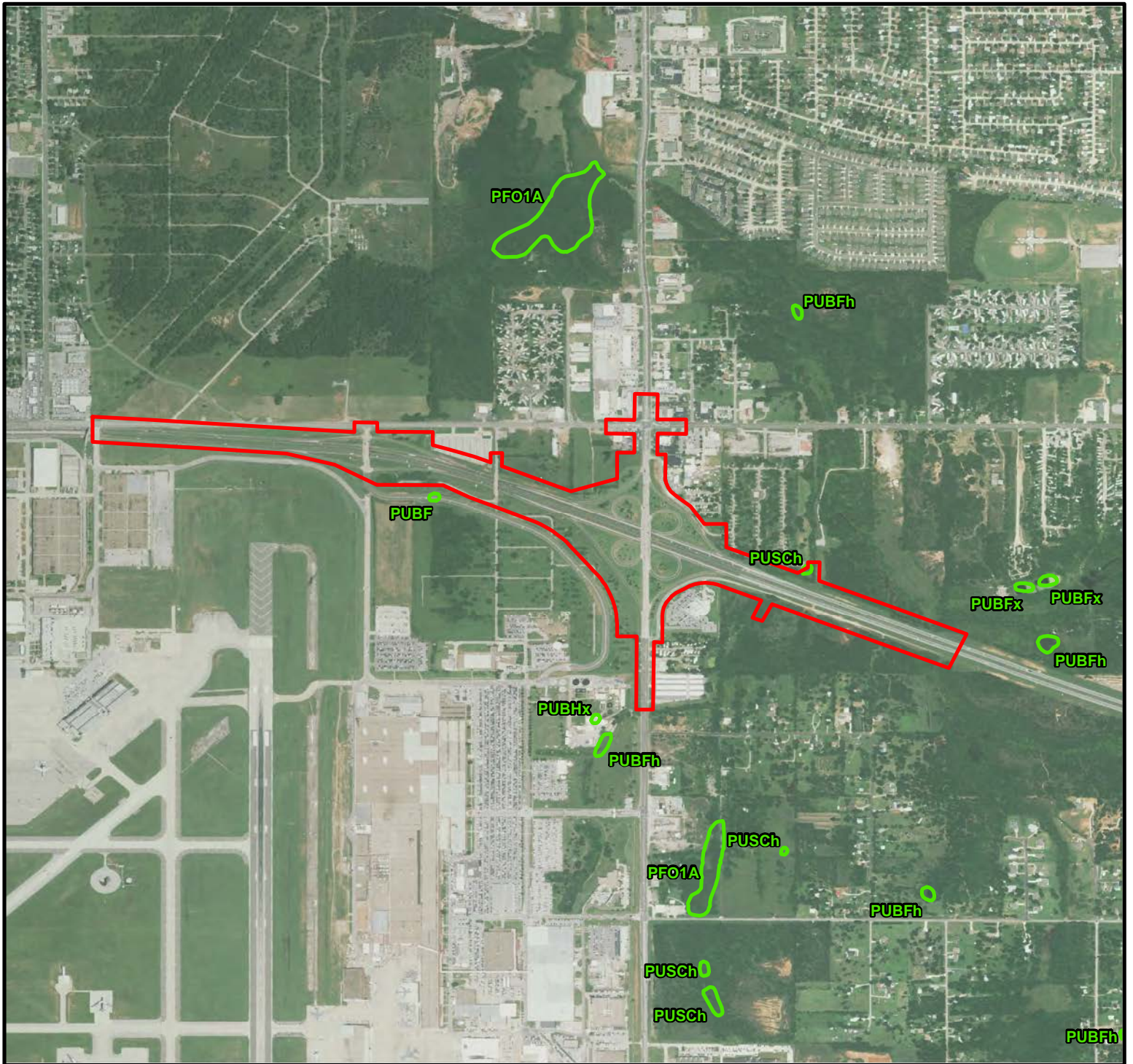


0 500 1,000 1,500
Feet

Triad Design Group

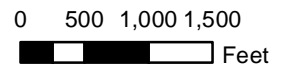
3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE	DATE	1/5/2017
NRCS SOILS MAP FOR JP 28992(04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
WATERS AND WETLANDS EVALUATION, I-40/DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	3
OKLAHOMA COUNTY, OKLAHOMA		



- Study Area
- NWI Wetlands

USFWS CONUS Wetland Polygons
2015 Ortho Imagery



Triad Design Group

3020 N.W. 149th Street
Oklahoma City, Oklahoma 73134
Ph. (405) 752-1122
Fax (405) 752-8855

FIGURE TITLE	NATIONAL WETLANDS INVENTORY MAP FOR JP 28992(04)
DOCUMENT TITLE	WATERS AND WETLANDS EVALUATION, I-40/DOUGLAS INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	1/5/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE
TRIAD PROJECT NUMBER	E211.06
FIGURE NUMBER	4

Triad Design Group

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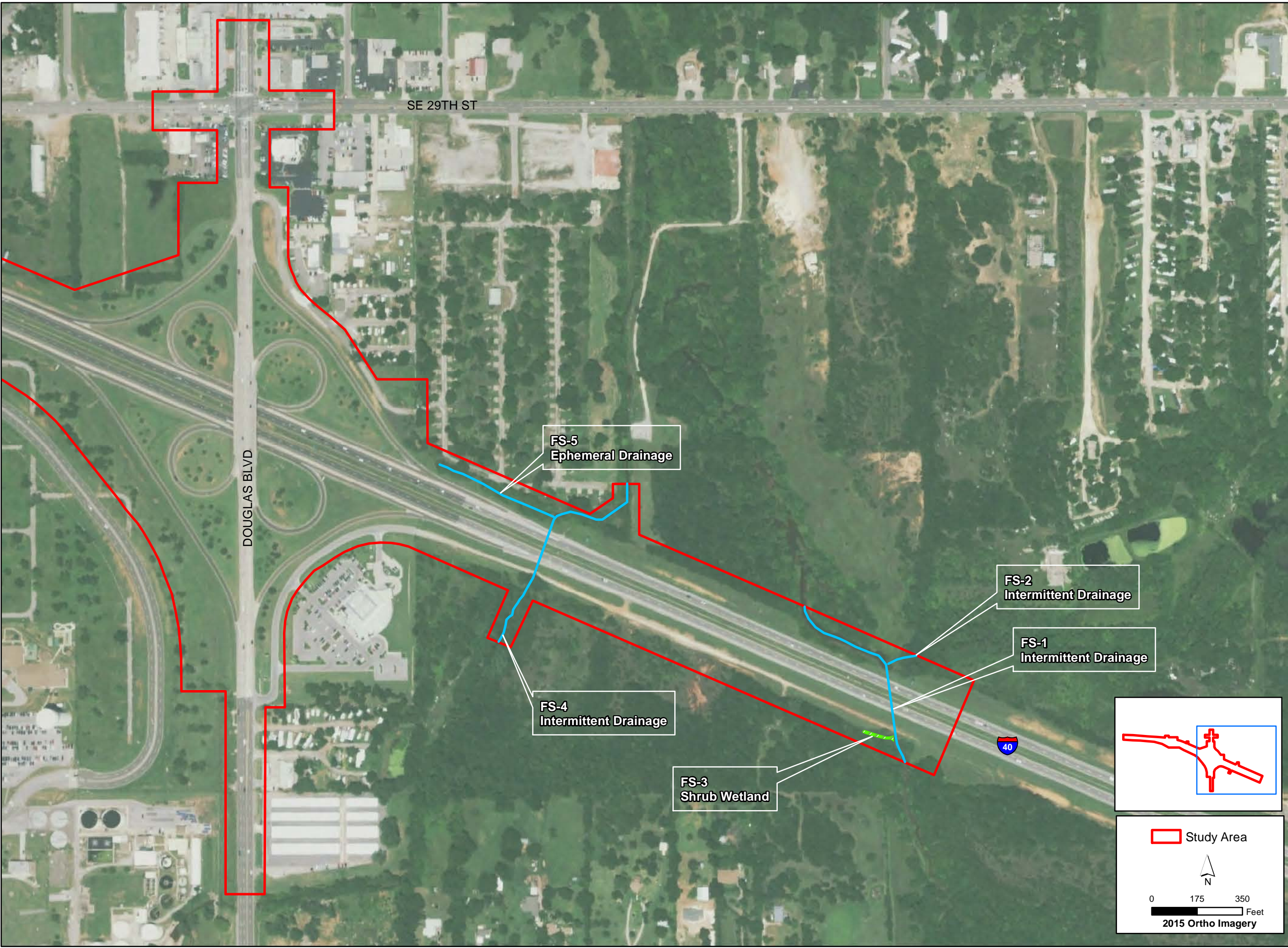
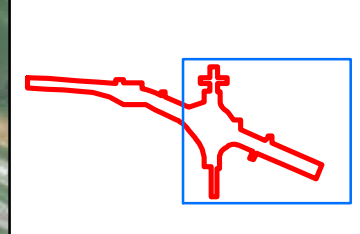


FIGURE TITLE	SITE MAP FOR JP 28992 (04)
DOCUMENT TITLE	WATERS & WETLANDS EVALUATION - I-40 & DOUGLAS BLVD INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	1/31/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER	5-A
---------------	------------

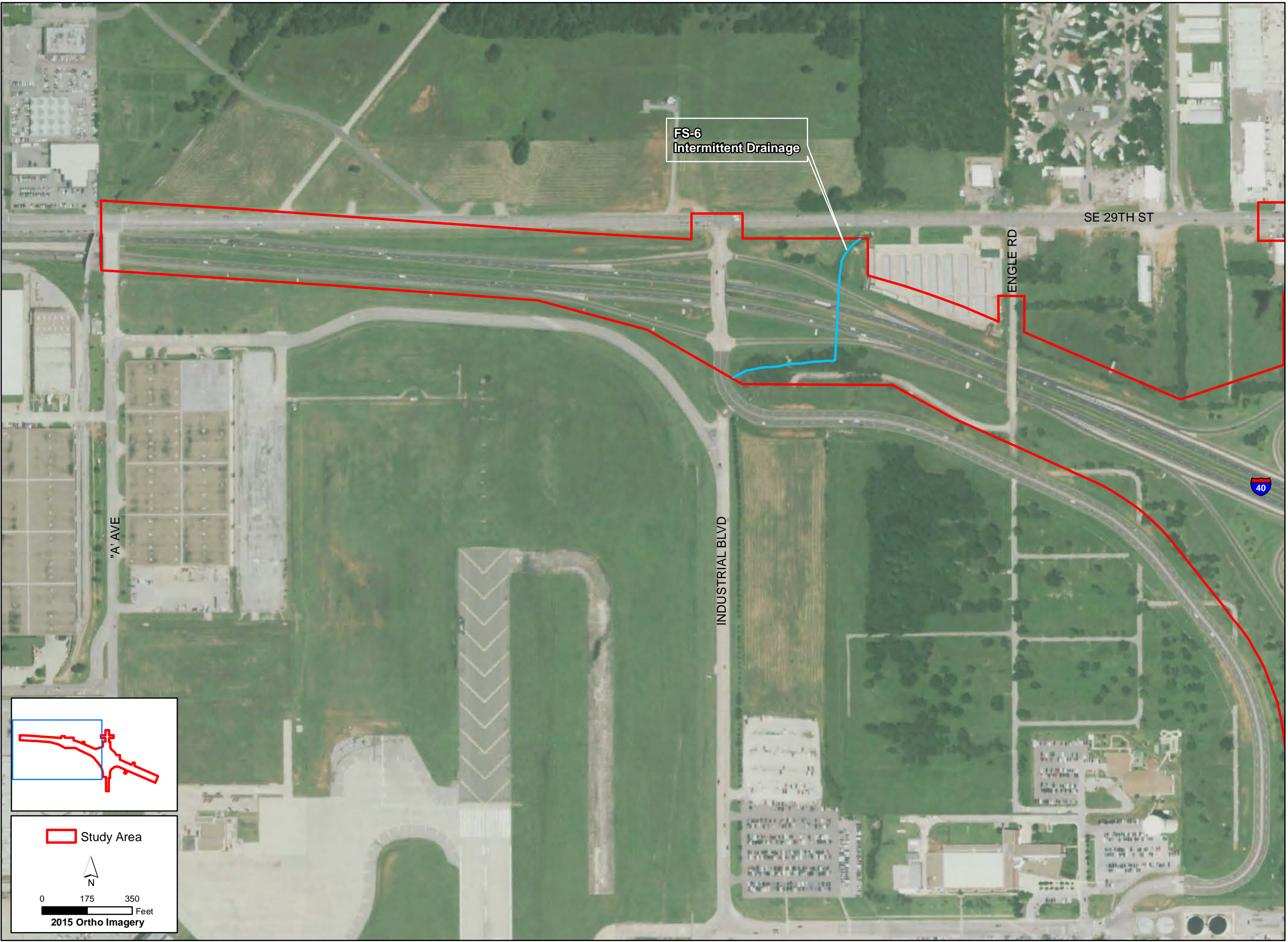


Study Area

 2015 Ortho Imagery

Triad Design Group

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 Oklahoma City, Oklahoma 73134
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 Fax (405) 752-8855



FS-6
 Intermittent Drainage

SE 29TH ST

ENGLE RD

"A" AVE

INDUSTRIAL BLVD

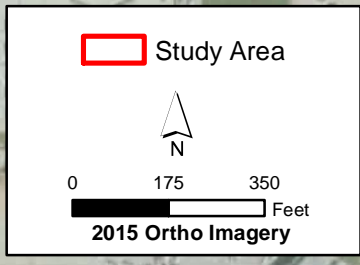
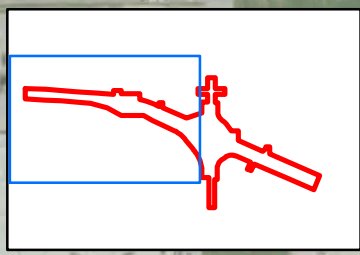


FIGURE TITLE	SITE MAP FOR JP 28992 (04)
DOCUMENT TITLE	WATERS & WETLANDS EVALUATION - I-40 & DOUGLAS BLVD INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	1/31/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	RE
DRAWN BY	RE

FIGURE NUMBER	5-B
---------------	------------



FS-1: Intermittent Drainage. View from south of I-40 facing southeast.



FS-2: Intermittent Drainage. View from confluence with FS-1 facing northeast.



FS-3: Shrub Wetland. View facing east.



FS-4: Intermittent Drainage. View from south of I-40 facing southwest.



FS-5: Ephemeral Drainage. View facing east.



FS-6: Intermittent Drainage. View from SE 29th St facing southwest.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: _____ City/County: _____ Sampling Date: _____
 Applicant/Owner: _____ State: _____ Sampling Point: _____
 Investigator(s): _____ Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: _____ _____ _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): _____ (A)
 Total Number of Dominant Species Across All Strata: _____ (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species _____ x 1 = _____
 FACW species _____ x 2 = _____
 FAC species _____ x 3 = _____
 FACU species _____ x 4 = _____
 UPL species _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
 ___ 1 - Rapid Test for Hydrophytic Vegetation
 ___ 2 - Dominance Test is >50%
 ___ 3 - Prevalence Index is ≤3.0¹
 ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 ___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No _____

Remarks: _____

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR F)
- 1 cm Muck (A9) (LRR F, G, H)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)
- 5 cm Mucky Peat or Peat (S3) (LRR F)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- High Plains Depressions (F16)
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)
- Salt Crust (B11)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Dry-Season Water Table (C2)
- Oxidized Rhizospheres on Living Roots (C3)
- (where not tilled)**
- Presence of Reduced Iron (C4)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

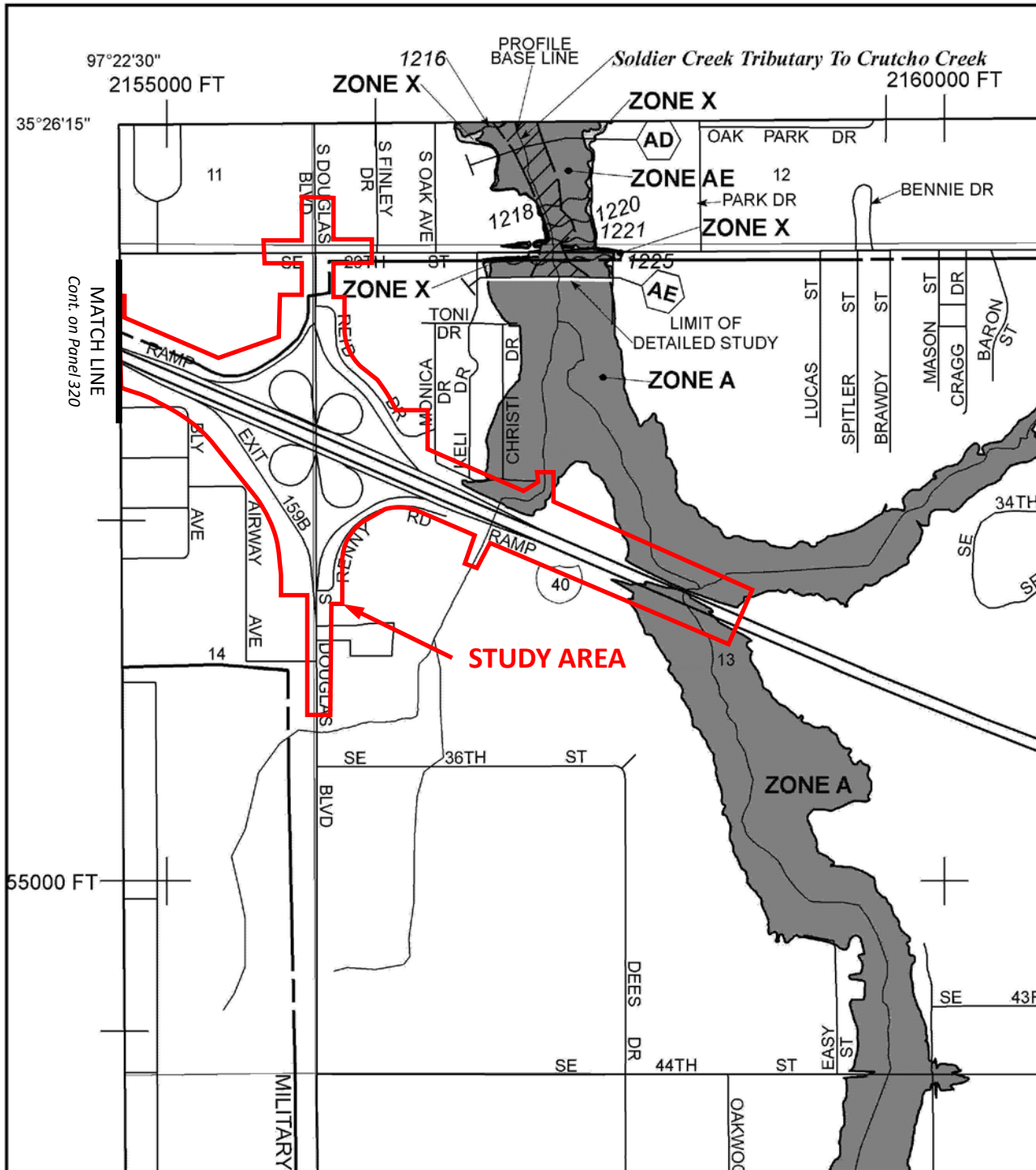
Surface Water Present? Yes _____ No _____ Depth (inches): _____
 Water Table Present? Yes _____ No _____ Depth (inches): _____
 Saturation Present? Yes _____ No _____ Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No _____

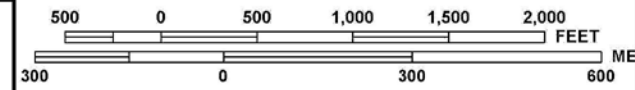
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FLOOD PLAIN INFORMATION



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0340H

FIRM

FLOOD INSURANCE RATE MAP
OKLAHOMA COUNTY,
OKLAHOMA
AND INCORPORATED AREAS

PANEL 340 OF 370

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MIDWEST CITY, CITY OF	400405	0340	H
OKLAHOMA CITY, CITY OF	405378	0340	H

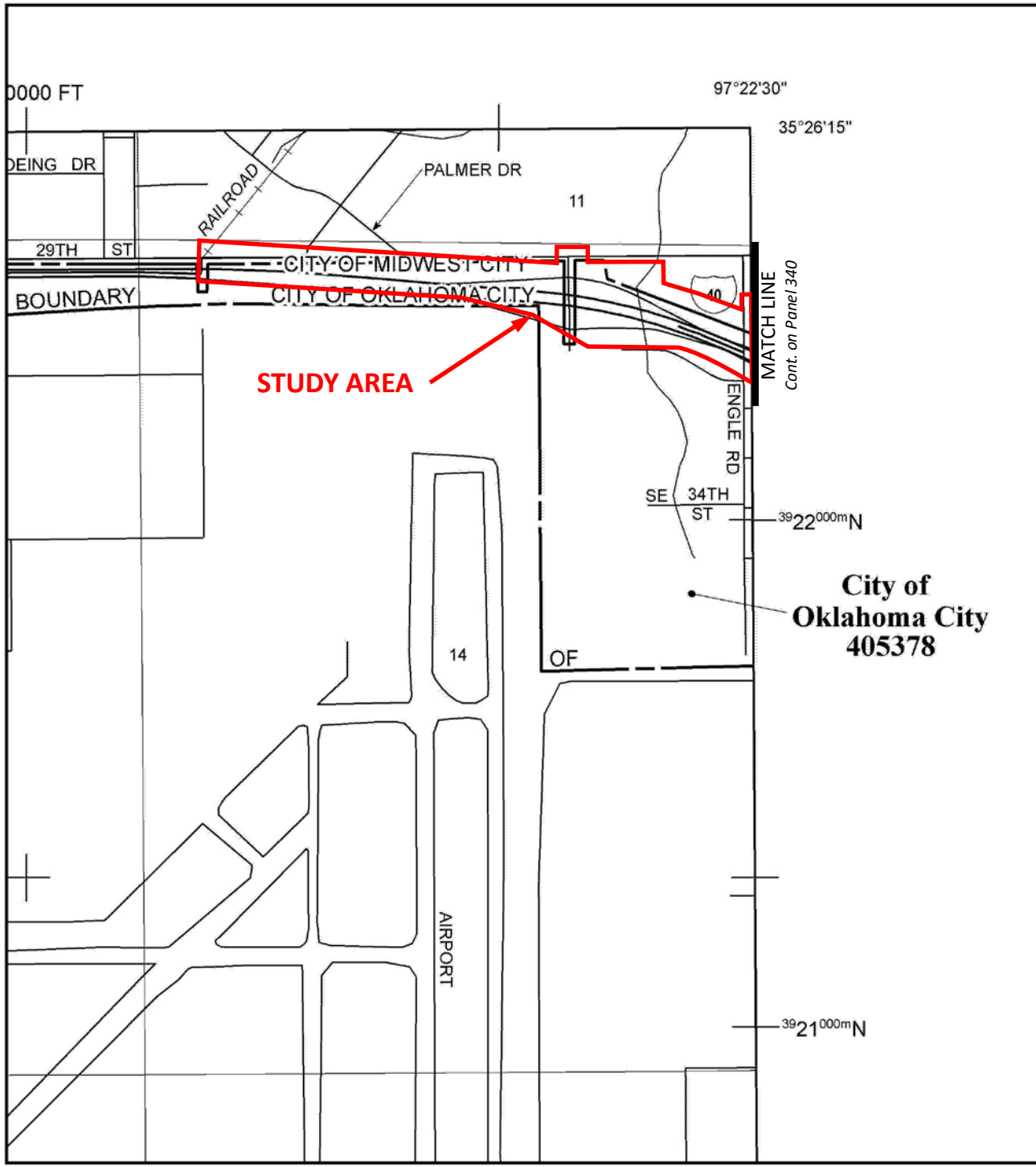
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



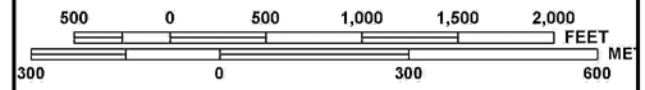
MAP NUMBER
40109C0340H

REVISED DATE
DECEMBER 18, 2009
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0320H

FIRM
FLOOD INSURANCE RATE MAP
OKLAHOMA COUNTY
OKLAHOMA
AND INCORPORATED AREAS

PANEL 320 OF 370
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEL CITY, CITY OF	400233	0320	H
MIDWEST CITY, CITY OF	400405	0320	H
OKLAHOMA CITY, CITY OF	405378	0320	H

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
40109C0320H

REVISED DATE
DECEMBER 18, 2009
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

HAZARDOUS WASTE STUDIES

**OKLAHOMA DEPARTMENT OF TRANSPORTATION
CONSULTANT REPORT REVIEW – HAZARDOUS WASTE**

Reviewed By: David Edwards
Review Date: 04/05/2017
Consultant: Triad

County: Oklahoma
Project No.: J2-8992(004)SS
J/P Number: 28992(04)

1. PROJECT DESCRIPTION: Interchange: I-40 Douglas Blvd. Bridge Replacement & Interchange Reconstruction 6.5 miles east of I-35 (included removal of Eagle Rd. bridge)

2. LEVEL OF INVESTIGATION: Assessment Sampling

3. SUMMARY OF INVESTIGATION

- A. Relative risk of contamination in study footprint: Low Moderate High
B. Potential for contamination, if present, to affect project: Low Moderate High
C. Did Consultant recommend additional work? No Yes (describe below):

4. RECOMMENDATIONS*:

- Approval to Proceed (No Further Action)
 Approval to Proceed, Pending:
 Avoidance of described site(s)
 Plan Notes regarding described site(s) (See Section 5)
 Additional investigation by ODOT
 Approval NOT Recommended

* - If different from Consultant, explain in Section 6 General Comments

5. PLAN NOTES: None needed.

6. GENERAL COMMENTS: No environmental concerns noted.

ATTACH EXCERPTS FROM REPORT, AS APPROPRIATE.*

*The full document is on file with ODOT's Environmental Programs Division. Please contact David Edwards at (405) 521-2673 or daedwards@odot.org for more information.

INITIAL SITE ASSESSMENT

**I-40/Douglas Bridge and
Interchange Improvements
Oklahoma County, Oklahoma
JP #28992(04)**

**Prepared for:
Oklahoma Department of Transportation
200 N.E. 21st Street
Oklahoma City, Oklahoma 73105-3204**

**Prepared by:
Triad Design Group
3020 Northwest 149th Street
Oklahoma City, OK 73134
405-752-1122
405-752-8855 (fax)**

February 2017

**INITIAL SITE ASSESSMENT
I-40/Douglas Bridge and
Interchange Improvements
Oklahoma County, Oklahoma
JP #28992(04)
February 2017**

1.0 INVESTIGATIVE SUMMARY

1.1 OVERVIEW

Triad Design Group (Triad) has performed an Initial Site Assessment (ISA) for a bridge improvement project. The purpose of the ISA was to identify hazardous and potentially hazardous waste related problems within and adjacent to existing and proposed right-of-way for the project. The ISA was performed in accordance with ODOT's *Hazardous Waste Scope of Services, 09/18/2014*.

1.2 PROJECT DESCRIPTION

ODOT is proposing to improve the I-40 and Douglas Boulevard bridge and interchange, located in Oklahoma City, Oklahoma. The project area is located in Sections 11, 12, 13, and 14, Township 11 North, Range 2 West, Oklahoma County, Oklahoma. **Figure 1** provides a location map of the project.

1.3 SUMMARY OF FINDINGS

- Land use within and near the Study Area includes Tinker Air Force Base, located in the southwest quadrant of the interchange, and St. Anthony HealthPlex, located in the southeast quadrant. Further south of the interchange and east of Douglas Boulevard is an RV park and some commercial development. North of I-40 and east of Douglas Boulevard is a second RV park. The area north of I-40 near the Douglas Boulevard and S.E. 29th Street intersection is heavily commercial.
- Multiple groundwater monitoring wells are located at three unique locations within the Study Area.
- Based upon conversations with Tinker Air Force Base personnel, impacted sediment, surface water, and groundwater associated with the Soldier Creek National Priorities List site do not pose a hazard to construction personnel who may conduct excavation and other earth-moving activities.
- Utilities noted include stretches of overhead electric transmission lines running parallel to Douglas Boulevard south of I-40, and parallel to S.E. 29th Street across Douglas Boulevard.

1.4 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the Study Area observations and review of information gathered for this ISA, no recognized environmental conditions were noted within the Study Area that may require further investigation.

1.5 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §31.10 of 40 CFR 312.



Diane Abernathy, P. E

Three gas stations are located within or in close proximity to the Study Area. The OnCue station, located in the northwest quadrant of the Douglas Boulevard/S.E. 29th Street intersection, has 20 gasoline pumps. The EDR report for this facility indicates several confirmed cases of leaking underground storage tanks (LUSTs), all recorded as “closed,” with the most recent in 2003. The Shell/Circle K station, located in the northeast quadrant of the Douglas Boulevard/S.E. 29th Street intersection, has 8 gasoline pumps. The EDR report for this facility indicates a confirmed LUST, with the case recorded as “closed” in 2007. The facility is reported to have two 12,000-gallon and one 10,000-gallon gasoline USTs currently in service. The Tank n’ Tummy, located south of I-40 and east of Douglas Boulevard, has 4 gasoline pumps. The EDR report for this facility indicates a confirmed LUST, with the case recorded as “closed” in 2016. The facility is reported to have three 10,000-gallon gasoline USTs currently in service. See **Appendix D, Photos 1, 2, and 3**.

Utilities noted during site reconnaissance include stretches of overhead electric transmission lines running parallel to Douglas Boulevard south of I-40, and parallel to S.E. 29th Street across Douglas Boulevard.

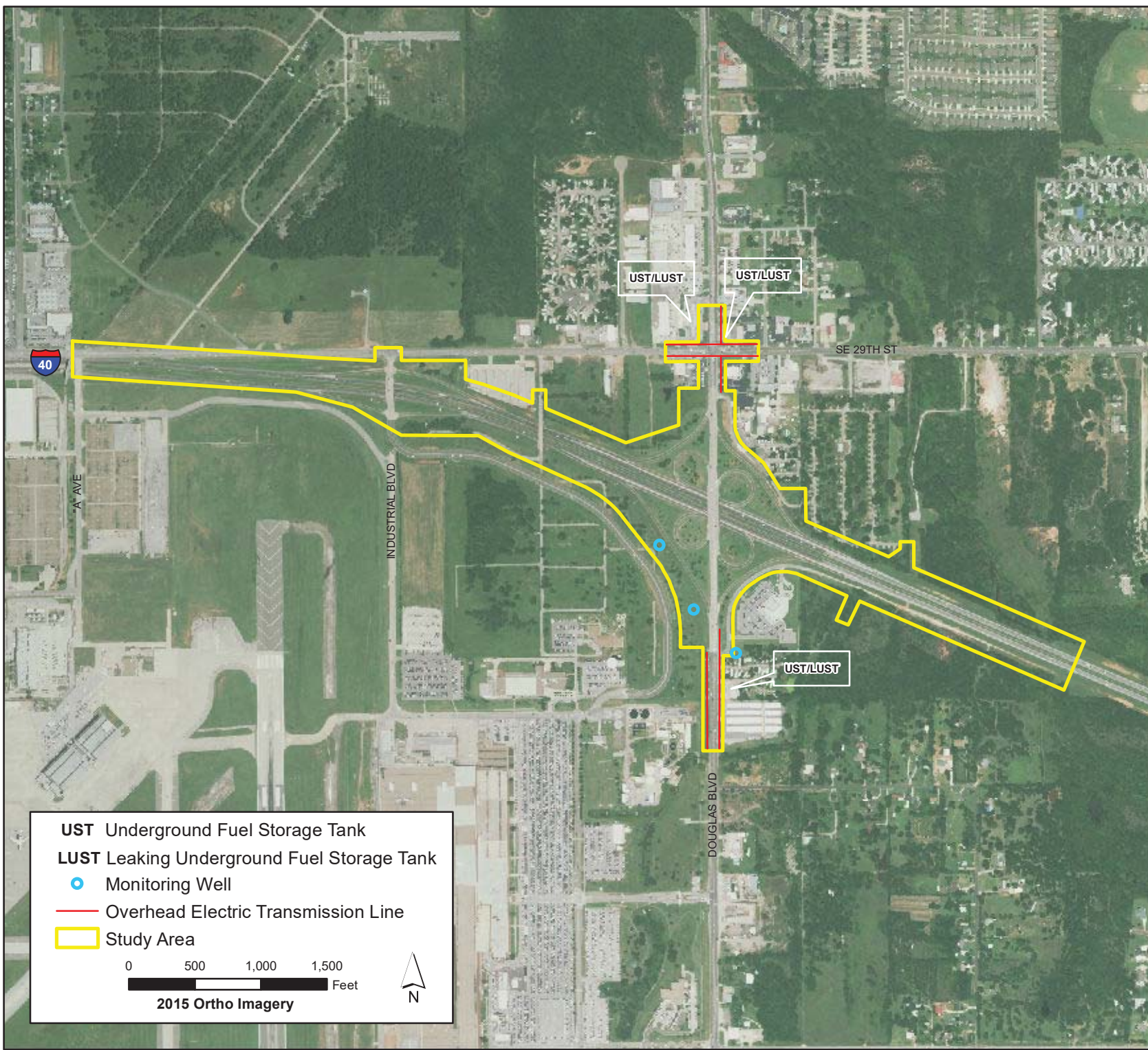
Figure 2 presents the site reconnaissance observations.

3.4 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based upon the site visit and a review of available environmental records, no recognized environmental conditions were noted within the Study Area.

Triad Design Group

3020 N.W. 149th Street
 Oklahoma City, Oklahoma 73134
 Ph. (405) 752-1122
 Fax (405) 752-8855



UST Underground Fuel Storage Tank
LUST Leaking Underground Fuel Storage Tank
 Monitoring Well
 Overhead Electric Transmission Line
 Study Area

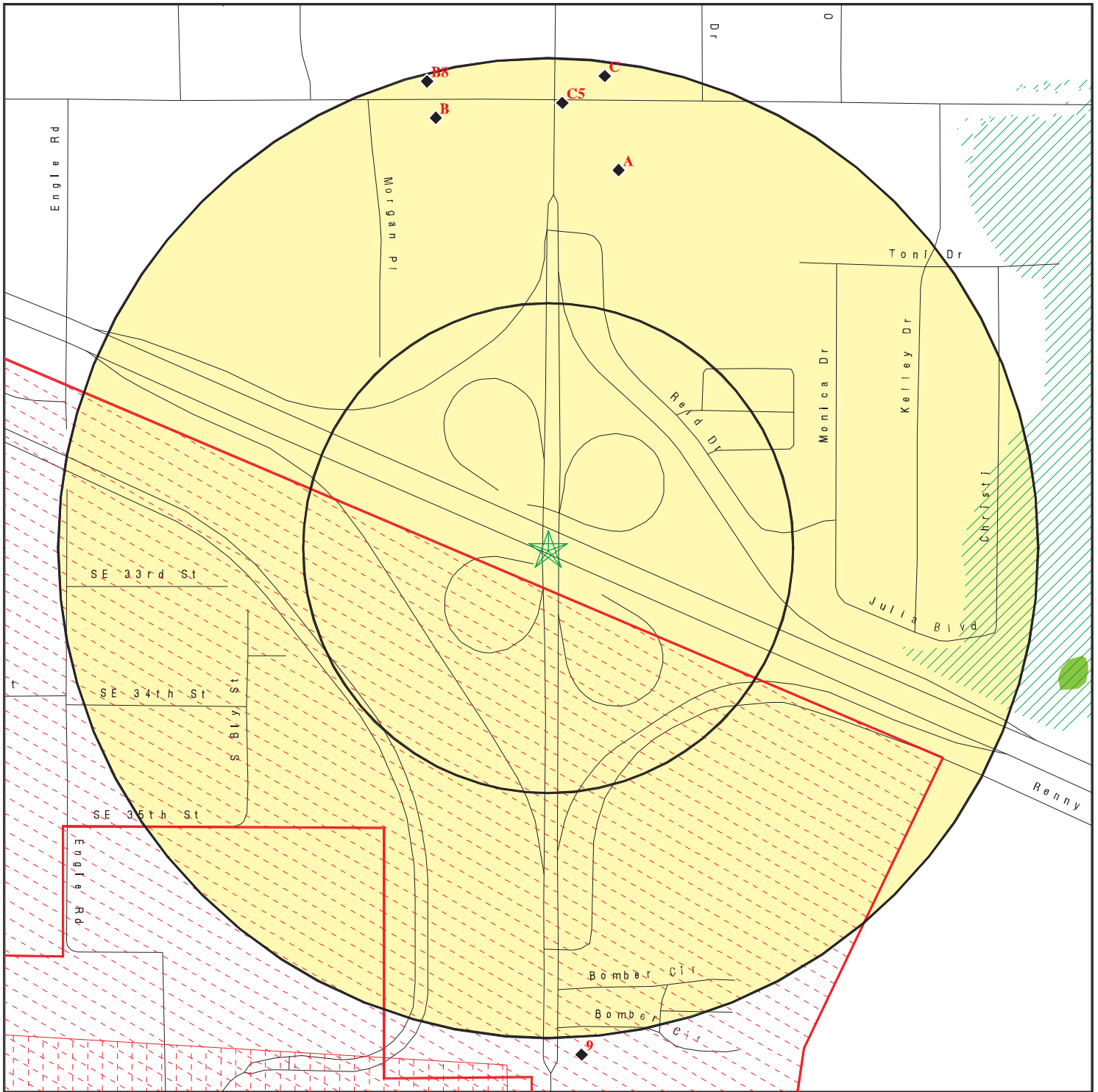
0 500 1,000 1,500 Feet
 2015 Ortho Imagery

FIGURE TITLE	STUDY AREA AND SITE RECONNAISSANCE OBSERVATIONS, JP 28992(04)
DOCUMENT TITLE	INITIAL SITE ASSESSMENT - I-40 & DOUGLAS BOULEVARD INTERCHANGE
CLIENT	OKLAHOMA DEPARTMENT OF TRANSPORTATION
LOCATION	OKLAHOMA COUNTY, OKLAHOMA

DATE	2/6/2017
SCALE	AS SHOWN
DESIGNED BY	TS
APPROVED BY	DA
DRAWN BY	ME

FIGURE NUMBER	2
---------------	----------

DETAIL MAP - 4811111.2S



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- ▨ National Priority List Sites
- ▨ Dept. Defense Sites

- ▨ Indian Reservations BIA
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: I-40 and Douglas Interchange
 ADDRESS: I-40/Douglas
 Oklahoma City OK 73150
 LAT/LONG: 35.431906 / 97.370842

CLIENT: Triad Design Group
 CONTACT: Diane Abernathy
 INQUIRY #: 4811111.2s
 DATE: December 20, 2016 11:52 am

NOISE STUDIES



Oklahoma Department of Transportation

Environmental Programs Division, 200 N.E. 21st Street, Oklahoma City, OK 73105
Main Office 405.521.3050 / Fax 405.522.5193

DATE: **June 12, 2017**

TO: Diane Abernathy – Triad Design Group

FROM: Kevin Larios – Noise Specialist *KML*

SUBJECT: **Approved Traffic Noise Assessment prepared for I-40 & Douglas Boulevard Bridge Replacement and Interchange Reconstruction, Oklahoma County, JP 28992(04) (EC-1394W).**

Attached is the approved Traffic Noise Assessment completed for the subject project. The results of the noise study are summarized as follows:

The analysis had utilized the FHWA Traffic Noise Model version 2.5 in accordance with FHWA 23 CFR 772 and complies with the ODOT Noise Policy dated July 13, 2011. For the purposes of validating the noise model, a precision sound level meter was utilized in conducting field measurements along the existing I-40 which proved successful. The land use within the project limits consists primarily of commercial and industrial mix; however, two medical facilities, one Recreational Vehicle (RV) Park, one mobile home park and scattered residences exist. Thirty-one (31) model receptor locations representing a total of 67 receptors were analyzed. For the existing (2014) condition, three (3) residential and twenty-one (21) RV Park receptors approach, meet or exceed the 67 dB(A) $L_{EQ}(h)$ for NAC Activity Categories B and C, respectively. For the future condition (design year 2045), seven (7) residential and two (2) RV Park receptors approach, meet or exceed the 67 dB(A) $L_{EQ}(h)$ for NAC Activity Categories B and C. No commercial receptors approach the 72 dB(A) $L_{EQ}(h)$ for NAC Activity Category E. An interior analysis was conducted for the St. Anthony's HealthPlex and Animal Medical facility; these receptors were evaluated as NAC Activity Category D in which no existing or future noise impacts occur. In addition, the affected receptors are anticipated to experience an increase in future noise levels ranging from -2.0 to 4.0 dB, and thus, no substantial increase (15 dB) over the current condition when considering noise impact determination.

Noise mitigation in the form of a free-standing noise wall was considered for the impacted receptors. Seven (7) of the residential receptors located at the south end of the project limits have direct driveway access onto Douglas Boulevard. Without access control, the gap that would be required for the driveway connections would make noise abatement measures ineffective and, therefore, noise mitigation would not prove feasible. The other two (2) impacted receptors are located within the Eastland Hills RV Park. A noise barrier was modeled inside the highway right-of-way line along the access road to the RV Park at various heights. Based on the barrier analysis of a noise wall consisting of 608 feet in length at a maximum height of 22-feet was not able to achieve the desired 5.0 to 7.0 dB(A) noise reduction; therefore, noise mitigation is not feasible. Based on the inability of this noise wall not able to attain the acceptable reduction of future noise levels for these receptors, no noise barrier is recommended for design.

KML

Attachment

Copy: Jared Schwennesen, ODOT EPD
Reneé Ellis, Noise Specialist - Triad Design Group

TRAFFIC NOISE ASSESSMENT

I-40 & Douglas Boulevard Bridge Replacement
and Interchange Reconstruction
Oklahoma County, Oklahoma
J/P 28992(04)

Prepared for:



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Revised – June 9, 2017



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EXECUTIVE SUMMARY

This traffic noise assessment report examines the potential noise impacts associated with the proposed I-40 & Douglas Boulevard bridge replacement and interchange reconstruction in Oklahoma City, 6.5 miles east of I-35 in Oklahoma County.

The noise analysis was performed using the FHWA's computer model Traffic Noise Model version 2.5 in accordance with the FHWA 23 CFR 772, Procedures for Noise Abatement of Highway Traffic Noise and Construction, and complies with the ODOT Policy Directive Highway Noise Abatement C-201-3 dated July 13, 2011.

The land use within the project limits consists primarily of commercial and industrial mix; however, two medical facilities, one Recreational Vehicle (RV) Park, one mobile home park, and scattered residences exist. The noise analysis for the proposed action predicts the greatest exterior noise impacts to occur at noise sensitive sites near the project during the highest traffic volume and vehicle speeds for an hour combined considered as the "worst hour for traffic noise." The existing and future condition analyses included 31 model receiver locations representing a total of 67 receivers. For the existing (2014) condition, 3 residential receivers, 20 RV Park receivers and the RV Park office approach, meet or exceed the 67 dB(A) Leq(h) for NAC Activity Categories B and C, respectively. For the future condition (design year 2045), 7 residential dwellings and 2 RV Park receivers approach, meet or exceed the 67 dB(A) Leq (h) for NAC Activity Categories B and C. No commercial establishments meet or exceed the 72 dB(A) Leq (h) for NAC Activity Category E. An interior analysis was conducted for the St. Anthony's HealthPlex and Animal Medical facility; these receivers were evaluated as NAC Activity Category D in which no existing or future noise impacts occur. The future noise levels for those receivers evaluated are expected to increase on average 2.0 dB ranging from -2.0 to 4.0 dB over the existing condition. No receivers will experience a substantial increase (15 dB) noise levels over the current condition, which is considered to be a substantial increase for noise impact determination.

Noise mitigation in the form of a free-standing noise wall was considered for the impacted receivers. Seven (7) of the residential receivers (represented by model receivers R-1 and R-5) have direct driveway access onto Douglas Boulevard. Without access control, the gap that would be required for the driveway connections would make noise abatement measures ineffective and, therefore, noise mitigation would not prove feasible. The other two (2) impacted model receivers located within the Eastland Hills RV Park represented by model receiver R-6. A noise barrier was modeled inside the highway right-of-way line along the access road to the RV Park at various heights. Based on the barrier analysis of a noise wall consisting of 608 feet in length at a maximum height of 22-feet was not able to achieve the desired 5.0 to 7.0 dB(A) noise reduction; therefore, noise mitigation is not feasible. Based on the inability of this wall to acoustically reduce noise for these receivers, no noise barrier is recommended for design.

1 INTRODUCTION

This Traffic Noise Assessment investigates the noise impacts that could result from the I-40 and Douglas Boulevard bridge replacement and interchange reconstruction in Oklahoma City, 6.5 miles east of I-35 in Oklahoma County. A Single Point Urban Interchange (SPUI) will replace the existing clover-leaf interchange at this location. A SPUI is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing the single set of traffic signals. The SPUI interchange accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved from a four-lane to a six-lane facility in the project vicinity. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be reconstructed. **Figure 1** in the Appendix depicts the project location.

The analysis of this project relies on aerial maps, preliminary design plans, a field survey, and traffic data as provided to the Environmental Programs Division of the Oklahoma Department of Transportation (ODOT). The noise analysis was completed in accordance with the FHWA 23 CFR 772, *Procedures for Noise Abatement of Highway Traffic Noise and Construction*, and complies with the ODOT Policy Directive *Highway Noise Abatement C-201-3* (ODOT Noise Policy) dated July 13, 2011.

2 FUNDAMENTALS OF NOISE AND SOUND THEORY

Noise, defined as unwanted or excessive sound, is an undesirable by-product of our modern way of life. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criterion is based on such known impacts of noise on people as speech interference, sleep interference, physiological responses, hearing loss and annoyance. Highway traffic noise is a major contributor to overall transportation noise and is considered to be a line source of energy from which the energy levels dissipate vertically and laterally from the roadway. Traffic noise is not constant. It varies as each vehicle passes a point. The time-varying characteristics of environmental noise are analyzed statistically to determine the duration and intensity of noise exposure. In an urban environment, noise is made up of two distinct parts. One is ambient or background noise. Wind noise and distant traffic noise make up the acoustical environment surrounding the project. These sounds are not readily recognized, but combine to produce a nonirritating ambient sound level. This background sound level varies throughout the day, being lowest at night and highest during the day. The other component of urban noise is intermittent and louder than the background noise. Transportation noise and local industrial noise are examples of this type of noise. It is for these reasons that environmental noise is analyzed statistically.

Sound from highway traffic is generated primarily from a vehicle's tires, engine and exhaust. It is commonly measured in decibels (dB) and is a logarithmic unit and not added arithmetically as with more common linear units such as temperature. Sound is composed of many frequencies

measured in Hertz (Hz). The healthy young adult ear generally responds to sound in the range of 20 to 20,000 Hz. For highway traffic noise, since humans are not equally sensitive to all frequencies, noise is adjusted or weighted using an A-weighted scale. The A weighting scale is widely used in environmental analysis because it closely resembles the nonlinearity of human hearing. The unit of A-weighted noise is dB(A). Because highway traffic sounds fluctuate over time, an equivalent sound level is used to represent a single number to describe varying traffic sound levels. The term L_{eq} (h) refers to the steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same period. All traffic sound levels in this analysis will be expressed in dB(A) L_{eq} (h).

3 ANALYSIS METHODS

Traffic noise analysis consists of a comparison of physically measured or modeled noise levels for existing condition with projected noise levels for future condition. FHWA's software, TNM 2.5, utilized traffic volume, vehicle mix, vehicle speed, geometry of the roadway(s) and receiver site locations to compute the noise levels being that of the "hourly equivalent noise level". Preliminary alignment and roadway elevation characteristics were available for use in this noise analysis. A receiver is a location, usually representing a dwelling unit where frequent exterior human activity occurs. The chosen receiver is modeled for noise levels and evaluated for noise impacts. In some instances, a model receiver may represent several dwelling units and the receiver site location placed approximately 5-10 feet from the building leading towards the roadway. For this analysis, the peak hour volumes and corresponding speeds for automobiles, medium trucks and heavy trucks result in the noisiest conditions. During all other periods, the noise levels are expected to be less than indicated in this report.

The FHWA has seven noise activity categories based on land use and sound levels, each of which has its own Noise Abatement Criteria (NAC). The NAC categories are listed in Table 1 on the preceding page. If a project would result in higher L_{eq} (h) values than the NAC values for a given location, then noise abatement or mitigation measures must be evaluated. This noise study does include an interior analysis of 2 medical facilities where no frequent outside activity area exists. Both the structures are of building type described as Masonry with at least single glazed windows. No interior sound level meter measurements were conducted; however, in accordance with the ODOT Noise Policy the interior sound level predictions were computed by subtracting a 25 dB noise reduction factor from the predicted exterior levels for the building in question. For either exterior or interior evaluations, an impact occurs when, at a given receiver, future noise levels approach by one dB(A), meet or exceed the FHWA NAC for its activity category. An impact also occurs when the future sound levels exceed existing sound levels by 15 dB at a given receiver. Once an impact is identified, then noise abatement is considered for the impacted area. Only those areas for which mitigation is determined to be feasible and reasonable as defined by ODOT Noise Policy will be recommended.

TABLE 1 FHWA Noise Abatement Criteria (NAC) <i>Hourly A-Weighted Sound Level, decibels dB(A)</i>		
Activity Category	Activity Criteria¹ Leq (h)²	Activity Description
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B ³	67 (Exterior)	Residential.
C ³	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E ³	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	Undeveloped lands that are not permitted.

Notes:

1. The Leq(h) Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.
2. The equivalent steady-state sound level which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period, with Leq(h) being the hourly value of Leq.
3. Includes undeveloped lands permitted for this activity category.

4 TRAFFIC NOISE ANALYSIS

4.1 TRAFFIC DATA

The traffic data used to model noise levels in this analysis is based on traffic data and projections provided in the preliminary project plans. Traffic noise levels for the existing year 2014 and future design year 2045 traffic volumes were calculated using the FHWA TNM 2.5 model. The unit of measure for roadway traffic is the average annual daily traffic (AADT), which is defined as the estimate of traffic volumes in vehicles per day on a roadway, averaged from the seven annual average days of the week, for a calendar year. TNM utilizes the design hourly traffic (DHV) to determine the existing traffic noise levels and calculates the predicted noise levels which occur when the highest volume for an hour is combined with the highest speeds and considered as the “worst hour for noise.” DHV data is based on the percentage of hourly vehicular traffic present on the facility at the design capacity consisting of cars, medium trucks and heavy trucks. **Table 2** depicts the DHV values utilized in the modeling. The modeling assumed all vehicles were traveling at various speeds ranging from 20-70 mph for the existing condition and 50-70 mph for the future condition.

TABLE 2 Noise Model Traffic Volumes JP 28992 (04), I-40 & Douglas Interchange					
Location	AADT	DHV	Cars	Medium Trucks	Heavy Trucks
Existing (2014) I-40, West of Interchange	54,600	5,460	4,805	131	524
Future (2045) I-40, West of Interchange	84,600	8,460	7,445	203	812
Existing (2014) I-40, East of Interchange	43,000	4,300	3,784	103	413
Future (2045) I-40, East of Interchange	66,640	6,664	5,864	160	640
Existing (2014) Douglas Boulevard, North of Interchange	26,100	2,610	2,480	44	87
Future (2045) Douglas Boulevard, North of Interchange	49,540	4,954	4,706	83	165
Existing (2014) Douglas Boulevard, South of Interchange	16,900	1,690	1,606	28	56
Future (2045) Douglas Boulevard, South of Interchange	32,880	3,288	3,124	55	110
Existing (2014) Ramp Traffic Douglas SB to I-40 WB	6,100	610	598	6	6

TABLE 2 Noise Model Traffic Volumes JP 28992 (04), I-40 & Douglas Interchange					
Location	AADT	DHV	Cars	Medium Trucks	Heavy Trucks
Future (2045) Ramp Traffic Douglas SB to I-40 WB	11,225	1,122	1,100	11	11
Existing (2014) Ramp Traffic I-40 EB to Douglas SB	2,800	280	274	3	3
Future (2045) Ramp Traffic I-40 EB to Douglas SB	5,150	515	505	5	5
Existing (2014) Ramp Traffic Douglas NB to I-40 EB	900	90	88	1	1
Future (2045) Ramp Traffic Douglas NB to I-40 EB	2,575	257	252	3	3
Existing (2014) Ramp Traffic I-40 WB to Douglas NB	2,200	220	216	2	2
Future (2045) Ramp Traffic I-40 WB to Douglas NB	4,830	483	473	5	5
Existing (2014) Loop Ramp Traffic I-40 WB to Douglas SB	900	90	88	1	1
Future (2045) Ramp Traffic I-40 WB to Douglas SB	2,575	257	252	3	3
Existing (2014) Loop Ramp Traffic Douglas SB to I-40 EB	2,200	220	216	2	2
Future (2045) Ramp Traffic Douglas SB to I-40 EB	4,830	483	473	5	5
Existing (2014) Loop Ramp Traffic I-40 EB to Douglas NB	6,100	610	598	6	6
Future (2045) Ramp Traffic I-40 EB to Douglas NB	11,225	1,122	1,100	11	11
Existing (2014) Loop Ramp Traffic Douglas NB to I-40 WB	2,800	280	274	3	3
Future (2045) Ramp Traffic Douglas NB to I-40 WB	5,150	515	505	5	5

4.2 EXISTING CONDITION AND LAND USE

The Douglas Boulevard bridge (NBI # 15573) over I-40 is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft wide sidewalks on each side of the bridge. I-40 underneath Douglas Boulevard is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40. The project area was surveyed on January 11, 2017 to identify noise sensitive areas that may be affected by traffic noise. Based on aerial maps and the field investigation, the areas adjacent to the project are predominately commercial and industrial mix; however, two medical facilities, one Recreational Vehicle (RV) park, one mobile home park, and scattered single-family residential residential exist.

4.3 MODEL VALIDATION

For purposes of validating the noise model, field measurements were conducted using a Casella Model CEL-246 Type 2 Sound Level Meter. Three measurements were collected at two separate locations on January 11, 2017 and consisted of traffic counts, by vehicle type, collected simultaneously for a 15-minute duration at each measurement location. **Figure 2** in the Appendix depicts the location of the model validation sites. The existing roadway, collected traffic data and receiver locations were entered into TNM 2.5. Traffic volumes counted during the 15-minute measurement period were scaled up to one hour and entered into the model. The modeled sound levels were then compared with the field recorded sound levels to determine the accuracy of the model. **Table 3** includes a summary of measured and modeled sound levels used for model validation purposes. The modeled levels in TNM 2.5 were within ± 3 dB of the measured sound levels, so the model is considered valid for predicting sound levels in both the existing and future conditions. The field data, sound meter calibration certificate and the modeling results are on file with the ODOT Environmental Programs Division and available upon request.

TABLE 3 Model Validation				
Field Measurement	Location / Station*	Field Record Noise Level dB(A) Leq (h)	TNM Predicted Noise Level dB(A) Leq (h)	Difference (field-model)
1	I-40 – Station 369+00	80.7	78.9	1.8
2	I-40 – Station 360+00	80.4	79.0	1.4
3	I-40 – Station 360+00	81.5	78.8	2.7

*Station number is approximated to measurement location.

4.4 EXISTING NOISE LEVELS

Based on aerial maps and the field investigation, the areas adjacent to the project are predominately commercial and industrial mix; however, two medical facilities, one RV park, one mobile home park, and scattered residences exist. The residential dwellings were evaluated as NAC Activity Category B, the RV Park as NAC Activity Category C, the medical facilities as NAC Activity Category D, and all commercial as NAC Activity E. Thirty-one (31) receiver locations were selected for modeling purposes to identify noise levels for the existing and future conditions. **Figures 3-1** and **3-2** in the Appendix depict the location of the modeled receivers. Using the 2014 traffic data and existing roadway features, the existing sound levels were modeled for each receiver and summarized in **Table 4**. The TNM 2.5 input/output data for the existing condition is on file with the ODOT Environmental Programs Division and available upon request.

4.5 FUTURE NOISE LEVELS

Using the preliminary project plans and 2045 projected traffic data, the future noise levels expected from the proposed reconfiguration of the I-40 & Douglas Boulevard interchange were determined for the modeled receivers and are summarized in **Table 4**. The complete TNM 2.5 input/output data for the future condition are on file with the ODOT Environmental Programs Division and available upon request.

TABLE 4 Traffic Noise Levels Comparison, $dB(A) L_{eq}(h)$ JP 28992 (04), I-40 & Douglas Interchange							
Modeled Receiver	Receiver Type	NAC Activity Category	Dwelling Units	Existing (2014)	Future (2045)	Change (+/-)	Noise Impact
R-1	Residence	B	4	65.9	69.3	3.4	Yes
R-2	Residence	B	4	62.1	64.9	2.8	No
R-3	Residence	B	5	60.9	61.2	0.3	No
R-4	Residence	B	3	61.3	61.1	-0.2	No
R-5	Residence	B	3	66	69.4	3.4	Yes
R-6	RV Park Lot	C	2	68.4	66.4	-2	Yes
R-7	RV Park Lot	C	2	67.8	65.9	-1.9	No
R-8	RV Park Lot	C	2	67.1	65.1	-2	No
R-9	RV Park Lot	C	1	66.7	64.7	-2	No
R-10	RV Park Lot	C	3	66.8	65.4	-1.4	No
R-11	RV Park Lot	C	4	66.6	65.1	-1.5	No
R-12	RV Park Lot	C	3	66.3	64.3	-2	No
R-13	RV Park Lot	C	3	66	64	-2	No
R-14	RV Park Lot	C	3	65.8	64.1	-1.7	No
R-15	RV Park Lot	C	3	65.4	64.6	-0.8	No

TABLE 4 Traffic Noise Levels Comparison, dB(A) $L_{eq}(h)$ JP 28992 (04), I-40 & Douglas Interchange							
Modeled Receiver	Receiver Type	NAC Activity Category	Dwelling Units	Existing (2014)	Future (2045)	Change (+/-)	Noise Impact
R-16	RV Park Lot	C	3	65.1	64.1	-1	No
R-17	RV Park Lot	C	3	64.8	63.6	-1.2	No
R-18	RV Park Lot	C	3	64.6	63.3	-1.3	No
R-19	RV Park Lot	C	1	65.2	65.2	0	No
R-20	RV Park Lot	C	1	64.9	64.8	-0.1	No
R-21	Residence	B	1	58.9	59.7	0.8	No
C-1	Denny's	E	1	65.6	68	2.4	No
C-2	McDonald's	E	1	67.1	70.8	3.7	No
C-3	Midwest City Auto	E	1	64.9	68.9	4	No
C-4	Tank & Tummy	E	1	63.7	67	3.3	No
H-1*	St. Anthony's HealthPlex	D	1	41.7	41.2	-0.5	No
V-1*	Animal Medical	D	1	38.8	41.8	3	No
O-1	RV Park Office	C	1	66.4	65.9	-0.5	No

*Interior analysis method.

4.6 TRAFFIC NOISE IMPACTS

The traffic noise analysis for the proposed action predicts the greatest noise impacts to occur at noise sensitive sites near the proposed interchange project. As depicted in **Table 4**, for the future condition, 7 residential dwellings and 2 RV Park receivers meet or exceed the 67 dB(A) $L_{eq}(h)$ for NAC Activity Categories B and C. Interior analysis conducted for the medical facilities (evaluated as NAC Activity Category D) predicted no future noise impacts. The future noise levels for those receivers evaluated are expected to increase on average 2.0 dB ranging from -2.0 to 4.0 dB over the existing condition. No receivers will experience a substantial increase (15-dB) noise levels over the current condition which is considered to be a substantial increase for noise impact determination.

5 CONSIDERATION FOR ABATEMENT

The ODOT Noise Policy was used as the traffic-noise impact guideline for this analysis. This policy states that predicted noise levels attributed to roadway modifications resulting in increased traffic levels require an evaluation of measured noise impact and possible mitigation measures. Results of the analysis indicated that 7 residential dwellings and 2 RV Park receivers will have future noise impacts. Noise mitigation in the form of a free-standing noise wall is considered the most appropriate form of noise abatement measure for these impacted receivers.

Douglas Boulevard

Noise mitigation in the form of a free-standing noise wall was considered for 7 of the impacted residential receivers along Douglas Boulevard. These receivers have direct driveway access onto Douglas Boulevard. Without access control, the gap that would be required for the driveway connections would make noise abatement measures ineffective, and therefore, noise mitigation would not prove feasible.

Eastland Hills RV Park

A total of two (2) receivers within the Eastland Hills RV Park are predicted to be impacted by future noise levels. This recreational area is open year-round and the manager of the RV Park stated that most of his customers are permanent residents. A noise barrier was modeled inside the highway right-of-way line along the access road to the RV Park at various heights (see **Figure 4**). Based on the barrier analysis of a noise wall consisting of 608 feet in length at a maximum height of 22-feet was not able to achieve the desired 5.0 to 7.0 dB(A) noise reduction; therefore, noise mitigation is not feasible. Based on the inability of this wall to acoustically reduce noise for these receptors, no noise barrier is recommended for design. Noise levels with the noise barrier, as well as reduction of noise levels due to the noise barrier, are summarized in **Table 5**. The TNM 2.5 results and other related computations are on file with the ODOT Environmental Programs Division.

TABLE 5: Future Noise Levels with Mitigation Abatement Consideration for Eastland Hills RV Park			
Modeled Receptor	Future Level, Leq(h) With Noise Barrier	Reduction of Noise Levels due to Barrier (Insertion Loss)	Number of Benefited Receptors
R-6 (1 st Row) (2-lots)	64.1	2.3	0
R-7 (2-lots)	64.4	1.5	0
R-8 (2-lots)	64.4	0.7	0
R-9 (1-lot)	64.3	0.4	0
R-10 (1 st Row) (3-lots)	62.2	3.2	0
R-11 (4-lots)	62.5	2.6	0
R-12 (3-lots)	62.5	1.8	0
R-13 (3-lots)	62.6	1.4	0
R-14 (3-lots)	62.8	1.3	0
R-15 (1 st Row) (3-lots)	61.1	3.5	0
R-16 (3-lots)	61.1	3	0
R-17 (3-lots)	61	2.7	0
R-18 (3-lots)	61.1	2.2	0
R-19 (1 st Row) (1-lot)	61.6	3.6	0
R-20 (1-lot)	61.4	3.4	0
O-1 (RV Park Office)	61.4	4.6	0

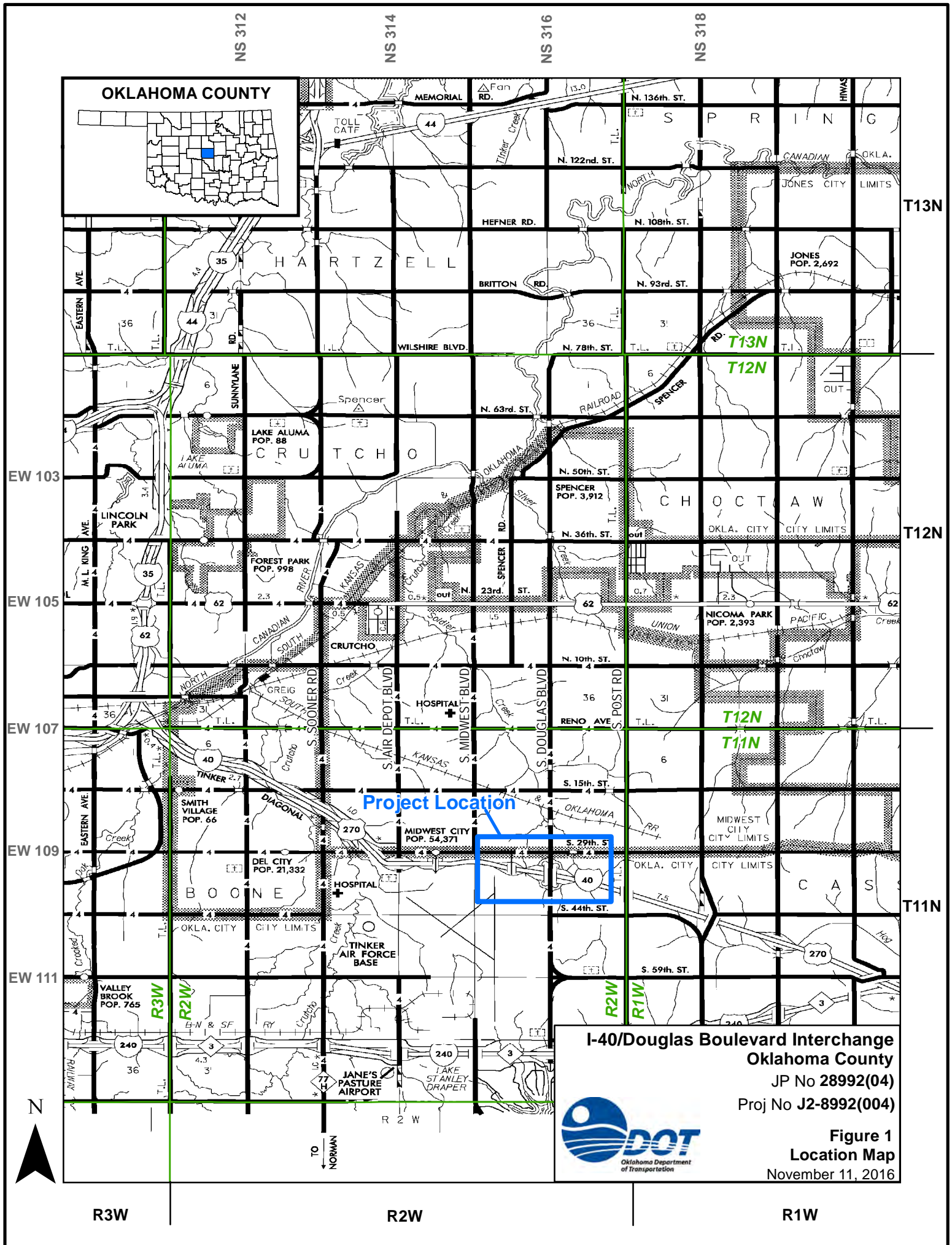
6 CONSTRUCTION NOISE

In general, construction noise related to highway projects is not a major issue. Sources of noise include heavy machinery like backhoes and scrapers, cranes, pile drivers, and trucks transporting materials. Typically, construction noise can be minimized by implementing time of day restrictions for construction operations adjacent to noise sensitive areas. ODOT is concerned of any special noise-sensitive land uses or activities which may be affected by construction noise from the proposed project, and any special measures which are feasible and reasonable will be added to the project plans and specifications. No special noise sensitive land uses or activities that may be affected by construction noise are in proximity to the project.

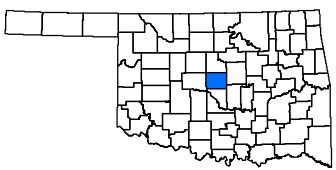
7 COORDINATION WITH LOCAL OFFICIALS

Traffic noise approaching and exceeding the sound levels specified in the ODOT Noise Policy resulting from the proposed I-40 and Douglas Boulevard interchange have been identified. Although land-use is somewhat fully developed, some undeveloped lands exist in the project vicinity as well as a vacant mobile home park in the northeast quadrant of the interchange. To aid in noise compatible land use planning, using the TNM 2.5 model, the distance from the center of the new roadway was used to determine the 66 dB(A) Leq (h) and 71 dB(A) Leq (h) future contour lines, referred as impact zones. Along I-40, the 66 dBA and 71 dBA impact zones were modeled to be approximately 425 feet and 285 feet, respectively, from the proposed center of the nearest three lanes of I-40. Along Douglas Boulevard, the 66 dBA and 71 dBA impact zones were modeled to be approximately 200 feet and 95 feet, respectively, from the centerline of Douglas Boulevard. **Figures 5-1 and 5-2** depict the future impact zone contour lines. Development within the future impact zone of the proposed project should be compatible with elevated traffic noise levels. Residential (NAC Activity Category B) and all NAC Activity Category C uses are discouraged within this impact zone due to anticipated future noise levels.

APPENDIX



OKLAHOMA COUNTY



Project Location

I-40/Douglas Boulevard Interchange
Oklahoma County
 JP No 28992(04)
 Proj No J2-8992(004)



Figure 1
Location Map
 November 11, 2016



R3W

R2W

R1W





 NEPA Study Area
 Model Validation Point



3020 N.W. 149th Street
 Oklahoma City, Oklahoma 73134
 Ph. (405) 752-1122
 Fax (405) 752-8855

FIGURE TITLE	DATE	2/17/2017
MODEL VALIDATION LOCATION MAP FOR JP 28992 (04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
NOISE ASSESSMENT FOR I-40 & DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	2
OKLAHOMA COUNTY, OKLAHOMA		



● Modeled Receivers



0 150 300
 Feet



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FIGURE TITLE	DATE	3/2/2017
MODELED RECEIVERS FOR JP 28992 (04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
NOISE ASSESSMENT FOR I-40 & DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	3-1
OKLAHOMA COUNTY, OKLAHOMA		



● Modeled Receivers

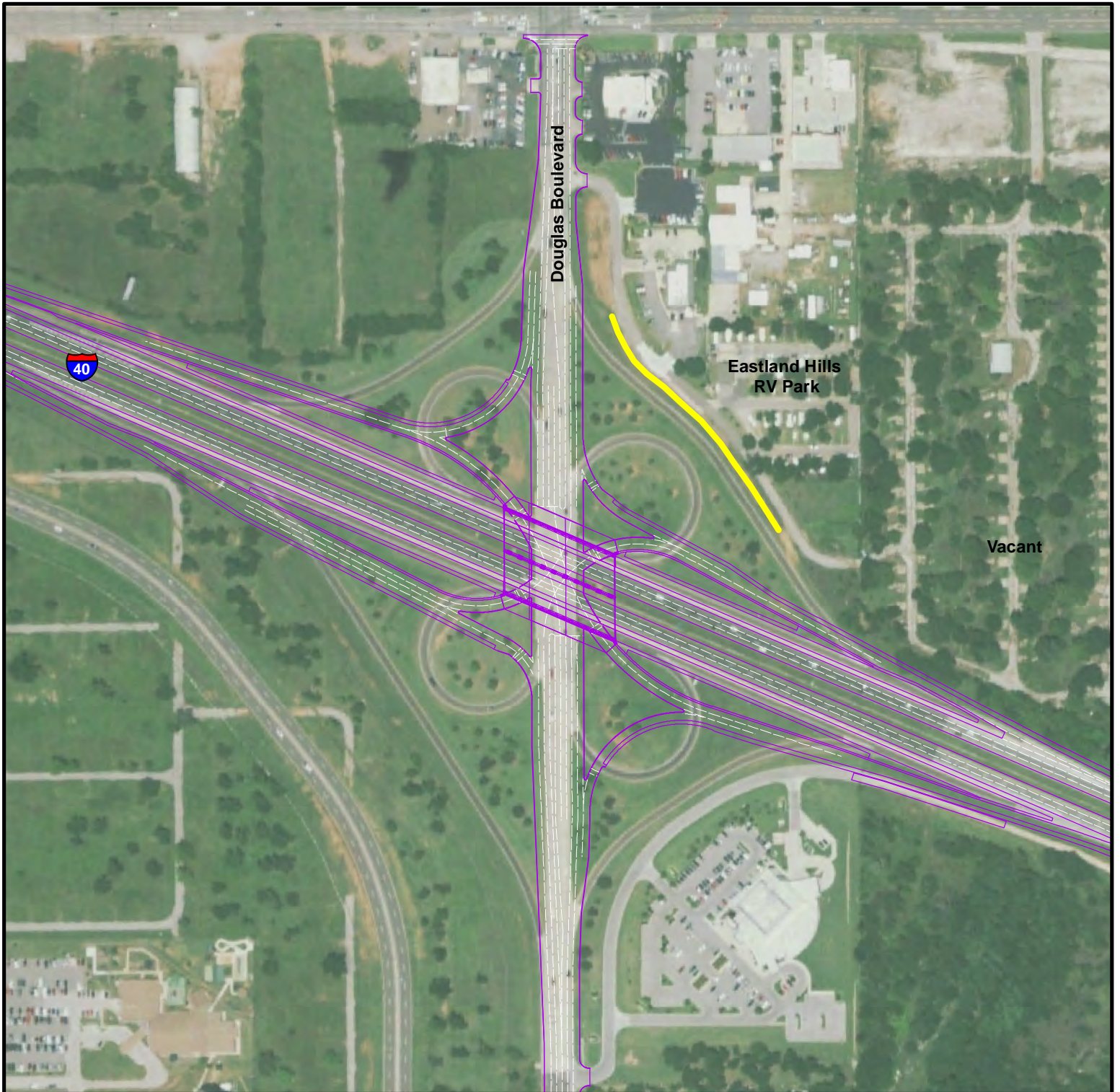




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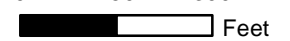
3020 N.W. 149th Street
 Oklahoma City, Oklahoma 73134
 Ph. (405) 752-1122
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FIGURE TITLE	DATE	3/2/2017
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OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	3-2
OKLAHOMA COUNTY, OKLAHOMA		



 Proposed New Alignment
 Barrier Analysis Location

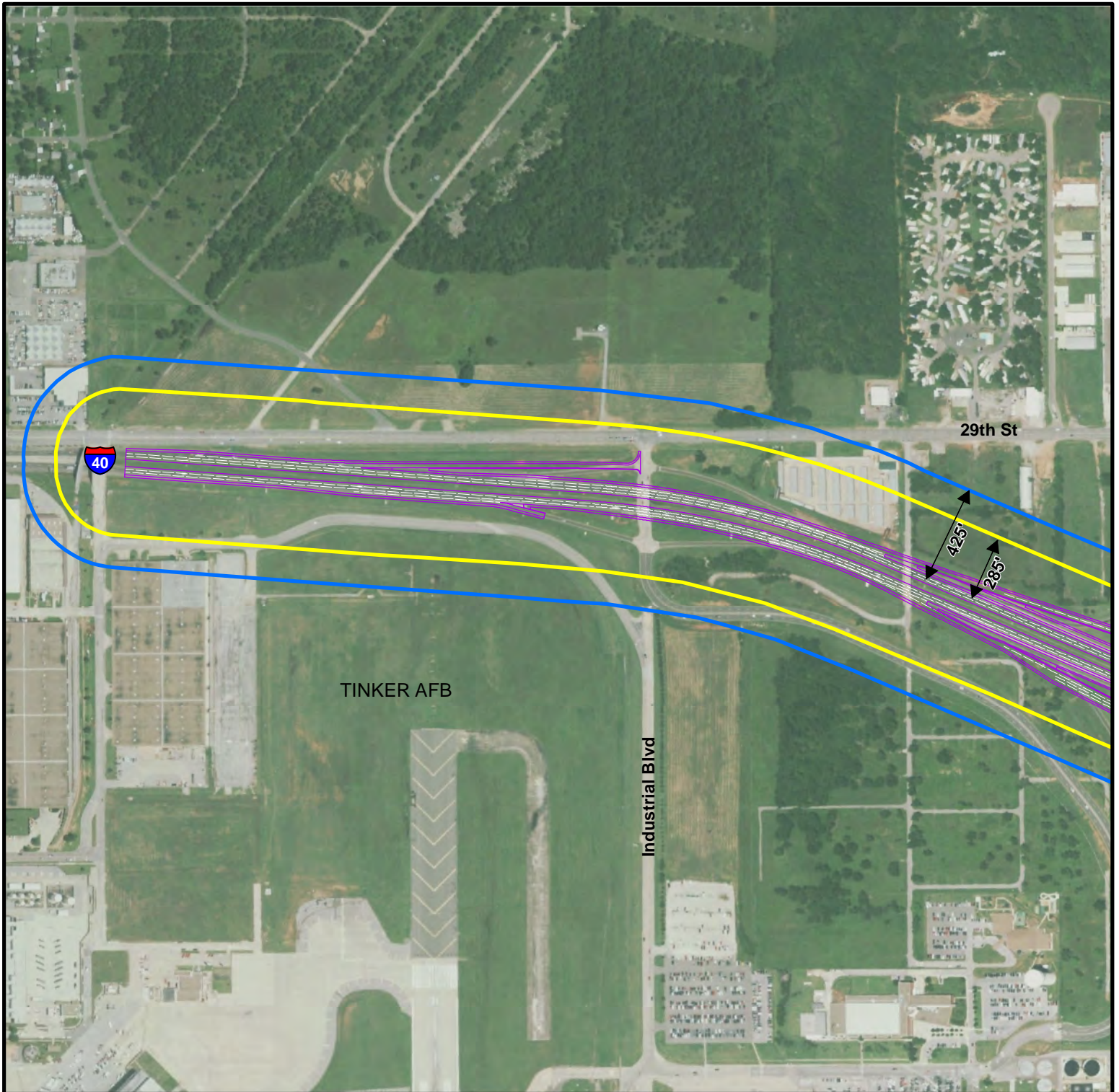


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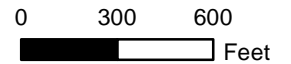


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FIGURE TITLE	DATE	3/2/2017
BARRIER ANALYSIS LOCATION FOR JP 28992 (04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
NOISE ASSESSMENT FOR I-40 & DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	4
OKLAHOMA COUNTY, OKLAHOMA		

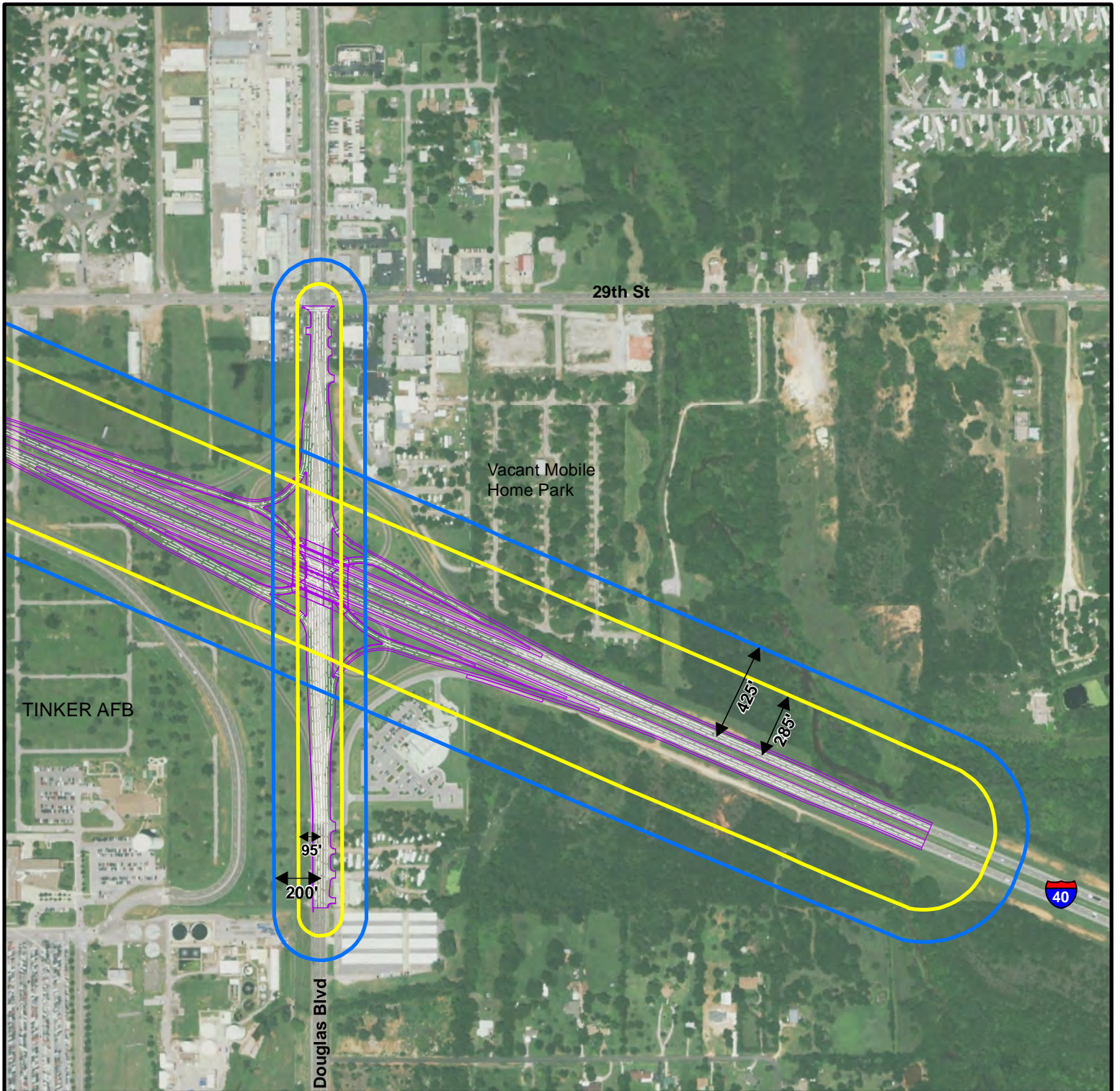


- Proposed New Alignment
- Future 66 dB(A) Contour
- Future 71 dB(A) Contour

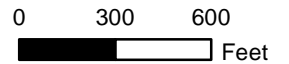


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 Oklahoma City, Oklahoma 73134
 Ph. (405) 752-1122
 Fax (405) 752-8855

FIGURE TITLE	DATE	3/2/2017
FUTURE NOISE CONTOUR MAP FOR JP 28992 (04)	SCALE	AS SHOWN
DOCUMENT TITLE	DESIGNED BY	TS
NOISE ASSESSMENT FOR I-40 & DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	
LOCATION	E211.06	
OKLAHOMA COUNTY, OKLAHOMA	FIGURE NUMBER	
	5-1	



- Proposed New Alignment
- Future 66 dB(A) Contour
- Future 71 dB(A) Contour



3020 N.W. 149th Street
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 Fax (405) 752-8855

FIGURE TITLE	DATE	3/2/2017
FUTURE NOISE CONTOUR MAP FOR JP 28992 (04)	SCALE	AS SHOWN
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NOISE ASSESSMENT FOR I-40 & DOUGLAS INTERCHANGE	APPROVED BY	RE
CLIENT	DRAWN BY	RE
OKLAHOMA DEPARTMENT OF TRANSPORTATION	TRIAD PROJECT NUMBER	E211.06
LOCATION	FIGURE NUMBER	5-2
OKLAHOMA COUNTY, OKLAHOMA		

OTHER

Documented Categorical Exclusion Justification Request

Date	12/06/17	Project No.	J2-8992(004)
County	Oklahoma	State Job Piece No.	JP#28992(04)
NEPA Project Manager	Siv Sundaram / Jared Schwennesen	Phone Number	405-521-2676
ODOT Field Division	4	Bridge NBI No. (County & State Projects) & Location No. (County Projects Only)	15560 and 15573
Project Description from JPINFO	<i>Douglas Boulevard Bridge Replacement and Interchange Reconstruction 6.5 Miles East of I-35 (includes removal of Engle Road bridge)</i>		

Existing Conditions

The Douglas Boulevard bridge over I-40 (NBI #15573) is six lanes wide including four through lanes, two loop ramp weaving lanes, curb and gutter, and 3-ft wide sidewalks on each side of the bridge. The existing Douglas Boulevard bridge is an 80-ft wide roadway width concrete continuous slab bridge, with a sufficiency rating of 77.0. The vertical clearance for I-40 is posted as 16-ft-9-in (eastbound) and 16-ft-4-in (westbound). The current annual average daily traffic (AADT) on Douglas Boulevard is 26,100 vehicles per day (vpd), and is projected to increase to 48,000 vpd by the year 2045.

I-40 underneath Douglas Blvd is a four-lane divided urban interstate with a 40-ft wide grass median, 12-ft wide driving lanes, 3-ft wide inside shoulders, and 10-ft wide outside shoulders. The current AADT on I-40 is 54,600 vpd, and is projected to increase to 84,600 vpd by the year 2045. The existing I-40 and Douglas Boulevard interchange is a full cloverleaf interchange with collector-distributor roads along I-40. The number of collisions at this location is higher than the state average at similar locations.

The existing Engle Road bridge (NBI #15560) over I-40 formerly provided access to a residential neighborhood south of I-40. However, the neighborhood no longer exists and the property is now owned by Tinker Air Force Base. Therefore, Engle Road bridge is closed to traffic and not in use.

This project will tie to an adjacent project east for I-40 improvements eastward to the I-40/Choctaw Road interchange.

Purpose & Need

The purpose of this project is to correct the functionally obsolete Douglas Boulevard bridge and improve safety while accommodating future traffic volumes, which indicate I-40 should be widened from four lanes to six lanes.

Alternatives considered, Logical Termini, & Proposed Improvement

Three (3) interchange alternatives were identified for consideration:

- Alternative 1 - Single Point Urban Interchange (SPUI). A Single Point Urban Interchange is a basic diamond interchange with a single signalized central intersection in the center of the bridge. The Douglas Boulevard traffic along with the I-40 ramp traffic will converge to a single point utilizing a single set of traffic signals. The SPUI accommodates large traffic volumes efficiently with minimal right-of-way impacts. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be

removed and will not be re-constructed. Alternative 1 would require less than one acre of right-of-way to be acquired from Oklahoma County in the southwest quadrant.

- Alternative 2 - Tight Urban Diamond Interchange (TUDI) with Ramp Flyover. A Tight Urban Diamond Interchange is an interchange that compresses a standard diamond interchange. This design includes all four interchange ramps, as well as the option of adding a future flyover ramp for northbound Douglas Boulevard traffic destined for westbound I-40. I-40 will be improved to a six-lane facility. Through the interchange, Douglas Boulevard will consist of six through lanes, dual left-turn lanes, and right-turn lanes where needed. Upon construction of the northbound to westbound ramp flyover, the northbound to westbound left-turn lanes on Douglas will be removed. Entrance and exit ramp lanes will also be constructed along I-40. Collector-distributor roads will be removed and will not be re-constructed. Alternative 2 would require less than one acre of right-of-way to be acquired from Oklahoma County in the southwest quadrant.
- Alternative 3 - Cloverleaf Interchange. The existing cloverleaf will be completely reconstructed to accommodate widening I-40 to a six-lane facility. All ramps and both collector-distributor roads will be reconstructed. Through the interchange, Douglas Boulevard will consist of four through lanes, two lanes for loop ramp weaving, two additional lanes located in the median which can be used in the future for left turning traffic, and entrance and exit lanes where needed. Entrance and exit ramp lanes will also be constructed along I-40. Alternative 3 would require less than one acre of right-of-way to be acquired from Oklahoma County in the southwest quadrant.

All three alternatives included the removal of Engle Road Bridge.

A Public Meeting was held to present the project information on January 17, 2017. At that meeting, the three alternatives described previously were presented, based on the results of an engineering design study.

ODOT received comments from the public, as well as state and federal agencies. More than half of the written public comments received which expressed support for an alternative supported Alternative 1. Alternative 2 received the next most support. Other public comments addressed traffic operations at the nearby S.E. 29th Street/Douglas Boulevard intersection, pedestrian accommodations, and other miscellaneous issues. Based on these comments and the completed engineering design study, ODOT has selected Alternative 1, the Single Point Urban Interchange, as the Preferred Alternative. Alternative 1 improves safety, accommodates large volumes of traffic, and provides greater mobility for both cars and large trucks due to long, gradual turns. Alternative 2 was eliminated due to higher construction costs and less efficient traffic operations and turning traffic mobility. Alternative 3 was eliminated due to less than desirable interchange geometry, fewer safety improvements, and difficulty in providing pedestrian facilities.

An Access Justification Report is being prepared for the proposed modification, with an anticipated submittal date of January 2018.

Did the project have public involvement *(Check the applicable items and include public involvement summary and supporting documents in the appendix)*

X	Property Owner Notification		Road Closure Letter		X	Public/Stakeholder Meeting
	Legal Notice/Website Posting		Small City Letter			None

IMPORTANT: ATTACH THE FOLLOWING:

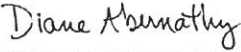

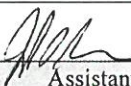
1. STUDY FOOTPRINT OR PLANS
2. THE PROJECT INITIATION REPORT, LOCAL GOVERNMENT NEPA CHECKLIST OR OTHER DOCUMENTS OUTLINING THE PROJECT SCOPE

ATTACHMENTS (Check all that apply):

- NEPA Study Footprint and Plans
- Location Map
- Other: Project Initiation Report, Public Involvement Summary

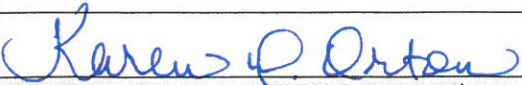
Reasons DCE format is being proposed rather than EA.		
Description/Question	Yes	No
1. Based on prior planning studies and public involvement – this project has no or little substantive controversy	X	
2. This project has no new R/W or minor R/W adjacent to the existing facility and no or few residential/commercial relocations.	X	
3. The project has no potentially significant social, economic, environmental impacts identified by studies or agency solicitation	X	

Requester's Signatures

 Diane Abernathy, Triad Design Group	12/06/17
Environmental Consultant Project Manager & Firm Name (If Applicable)	Date
 Rachel Hamigan	12/6/2017
ODOT Environmental Project Manager	Date
	12-8-17
Assistant Environmental Programs Division Engineer	Date

CONCLUSION:

Based on the 2011 ODOT/FHWA Programmatic Agreement for Categorical Exclusion processing and information provided, FHWA concurs that this project may be processed as a Documented CE (DCE). Upon completion of all studies and coordination, a draft DCE document will be submitted to FHWA for review and approval.	X	YES
		NO

Special Requirements from FHWA	
 Karen P. Orton	1-9-2018
FHWA Representative	Date

Attachments: Project Information listed above

ACCESS JUSTIFICATION REPORT

I-40 AND DOUGLAS BOULEVARD INTERCHANGE Oklahoma County, Oklahoma

J/P 28992(04)

Prepared for:



Oklahoma Department of Transportation
200 Northeast 21st Street
Oklahoma City, OK 73105

Prepared by:



Oklahoma Certificate of Authority No. 1759
3020 Northwest 149th Street
Oklahoma City, OK 73134
405-752-1122

DRAFT

February 2020

ACCESS JUSTIFICATION REPORT

I-40 AND DOUGLAS BOULEVARD INTERCHANGE Oklahoma County, Oklahoma

J/P 28992(04)

DRAFT

Prepared by:

Triad Design Group

Cassandra Pinta, P.E.

Date: _____

Submitted by:

Oklahoma Department of Transportation (ODOT)

Caleb Austin, P.E.

ODOT Roadway Design Engineer:

Date: _____

Concur:

Federal Highway Administration (FHWA)

Division Administrator:

Date: _____

Comments:

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APPENDIX C: NO BUILD FREEWAY FACILITY ANALYSIS
APPENDIX D: DOUGLAS BOULEVARD AND S.E. 29TH STREET INTERSECTION
ALTERNATIVES
APPENDIX E: HIGHWAY COLLISION DATA
APPENDIX F: CRASH PREDICTION EVALUATION REPORTS

EXECUTIVE SUMMARY

A bridge replacement and interchange reconstruction is proposed on I-40 at Douglas Boulevard in Oklahoma City, Oklahoma in Oklahoma County. The purpose of the project is to correct the functionally obsolete Douglas Boulevard bridge, add mainline I-40 capacity, and to configure an interchange that will accommodate future traffic volumes in a safe and efficient manner within the existing right-of-way constraints.

I-40 is a four-lane divided open section urban interstate with asphalt pavement in good condition. Town Center Drive, located 1.5 miles west of Douglas Boulevard, is a six-lane curbed local roadway. The I-40 and Town Center Drive Interchange is a full tight-diamond interchange utilizing taper ramps on the I-40 exit and entrance ramps. Industrial Boulevard, located 0.5 miles west of Douglas Boulevard, is a four-lane curbed local roadway. The I-40 and Industrial Boulevard Interchange is a full tight-diamond interchange utilizing taper ramps on the I-40 exit and entrance ramps. Douglas Boulevard is a four-lane curbed urban principal arterial. The I-40 and Douglas Boulevard Interchange is a full cloverleaf interchange with collector-distributor roads. Anderson Road, located 3.2 miles east of Douglas Boulevard, is a three-lane curbed urban major collector. The I-40 and Anderson Road Interchange is a full diamond interchange utilizing taper ramps on the I-40 exit and entrance ramps.

The existing interchange, at Douglas Boulevard, is a full cloverleaf interchange with collector-distributor roads. Transportation system management, such as the addition of HOV facilities, mass transit, or ramp metering, will not improve traffic operations on I-40 in this area. The replacement of the twin bridges at Douglas Boulevard overpassing I-40 and widening I-40 from four to six lanes will impact the collector-distributor roads, requiring an interchange reconstruction. Reconstructing the existing cloverleaf interchange was considered; however, the right-of-way restrictions compromised the geometry and offered few safety improvements. The loop ramps design speed would have been reduced to 20 mph and the weaving segments would have remained on Douglas Boulevard and the collector-distributor roads. Several new designs which remained within the existing right-of-way limits, improved safety, and managed traffic operations were considered. The proposed Single Point Urban Interchange (SPUI) was determined to best improve safety by eliminating the weaving segments that are prone to collisions, while managing traffic efficiently and remaining within the existing right-of-way limits.

I-40 will be reconstructed for a design speed of 60 mph. The vertical alignment will be lowered near the Douglas Boulevard Interchange to provide a minimum clearance of 16'-9". I-40 will be widened to six lanes with 10' inside and outside shoulders and a 33' paved median with a concrete longitudinal median barrier. A Single Point Urban Interchange (SPUI) will be constructed in place of a cloverleaf interchange. Douglas Boulevard will transition within project extents from four to six through lanes with additional turn lanes. The design speed on Douglas Boulevard will be 45 mph. A parallel sided bridge will be utilized to accommodate the SPUI intersection. Vertical abutments will be placed at the 30' clear zone, and one pier placed on the centerline of I-40. The bridge will consist of two spans with an overall nominal length of approximately 190' and an overall bridge deck width of approximately 240'. The SPUI configuration will provide all ramp

movements. On I-40, the design includes parallel entrance and exit ramps to the proposed Douglas Boulevard SPUI.

Additional improvements include removing the Engle Road Bridge over I-40 and removing the eastern ramps at the I-40 and Industrial Boulevard Interchange. The existing ramp configuration between the Industrial Boulevard and Douglas Boulevard Interchanges contains inadequate merge and diverge spacing between the interchanges. Due to the close proximity of the two interchanges, traffic that once utilized the eastern ramps on the Industrial Boulevard Interchange can utilize the Douglas Boulevard Interchange (approximately 0.5 miles east) or the Town Center Drive Interchange (approximately 1-mile west).

General project extents for I-40 run from a transition beginning just west of Industrial Boulevard extending east to approximately 2,800' east of Douglas Boulevard. Douglas Boulevard project extents run from 1,400' south of I-40 extending north to the south edge of S.E. 29th Street.

A traffic study was performed on the existing cloverleaf configuration and the proposed SPUI for the design years 2017 and 2045. The future SPUI configuration generates improvement to the intersection delay along Industrial Boulevard for both signalized and unsignalized intersections. The total signalized delay in 2045 is an average 40% greater with the future SPUI configuration in comparison to the existing cloverleaf configuration, which may be attributed to the addition of four signals and the additional traffic from the removed Industrial Boulevard ramps displaced onto Douglas Boulevard. The 2017 freeway facilities comparison results display several modest improvements to the I-40 freeway and the I-40 ramp merge and diverge locations with the future SPUI configuration in comparison to the existing cloverleaf interchange configuration with I-40 widening. The 2045 freeway facilities comparison results display improvements in level-of-service at the weaving segment between Industrial Boulevard and Douglas Boulevard.

A collision analysis was performed to assess the crash history from 01/01/2011 to 12/31/2015 for I-40, Douglas Boulevard, and the surrounding facilities. Throughout the study period there have been 640 collisions along I-40 between Town Center Drive and Anderson Road. The overall collision rate for this section is 135.11 collisions per 100 million vehicle miles, compared to the statewide rate of 66.82 for similar facilities. There have been 103 collisions related to the I-40 and Douglas Boulevard Interchange. Most of the collisions occur on ramp or collector-distributor road merge locations.

Utilizing the Interactive Highway Safety Design Model (IHSDM) Predictive Method, a safety analysis has been performed on the existing cloverleaf interchange and the future SPUI. The expected crash totals and crash rates from 2020 to 2045, a total of 25 years, were analyzed. Along I-40 the proposed future conditions reduce the annual crashes by 18.7%. The eastbound ramps combined reduce the annual crashes by 50.0%, and the westbound ramps combined reduce the annual crashes by 19.6%.

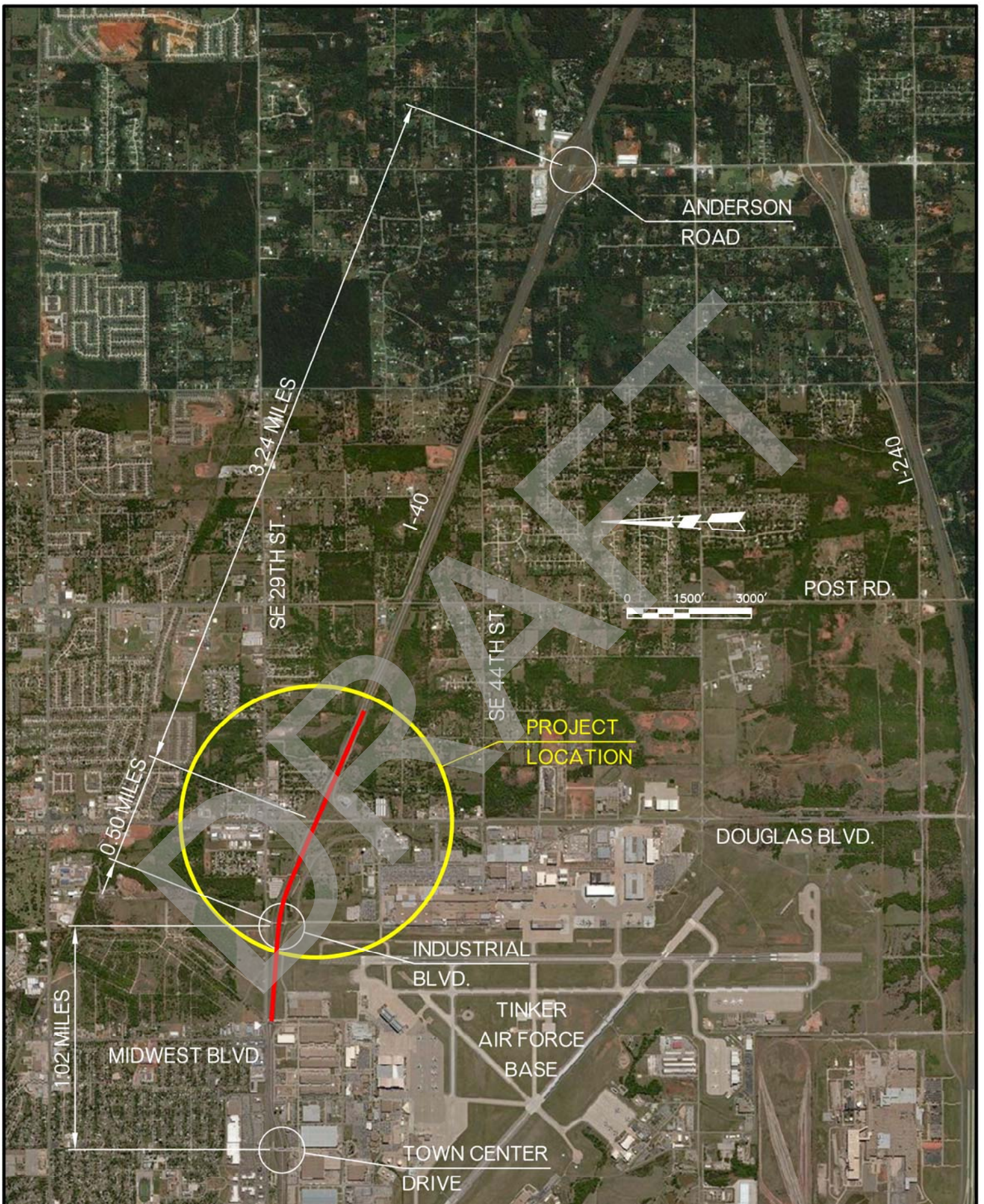
1 OPERATIONAL ANALYSIS

“An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (Title 23, Code of Federal Regulations (CFR), paragraphs 625.2(a), 655.603(d) and 771.111(f)). The crossroads and local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).”

1.1 PROPOSED INTERCHANGE IMPROVEMENTS AT I-40 AND DOUGLAS BOULEVARD

The existing I-40 and Douglas Boulevard Interchange is located in Oklahoma City, Oklahoma in Oklahoma County. The project location map is shown in Exhibit 1. The interchange currently services Oklahoma City (population 579,999), Midwest City (population 54,371), Tinker Air Force Base (TAFB), Saint Anthony Healthplex, a car dealership, assorted restaurants, and retail. Adjacent interchanges along I-40 are shown in Exhibit 1 and include Town Center Drive 1.5 miles west, Industrial Boulevard 0.5 miles west, and Anderson Road 3.2 miles east.

A bridge replacement and interchange reconstruction is proposed on I-40 at Douglas Boulevard. Exhibit 2 displays the proposed improvements at the I-40 and Douglas Boulevard Interchange. Exhibit 3 displays the ultimate design at the I-40 and Douglas Interchange after the Industrial Boulevard Bridge replacement and I-40 widening to six lanes at the western project extents is completed. All of the interchange improvements meet all design criteria and guidelines as presented in Exhibit 4 and in accordance with the current editions of AASHTO's *A Policy on Geometric Design of Highways and Streets* and AASHTO's *A Policy on Design Standards—Interstate System*. Conceptual Plans are located in Appendix A.

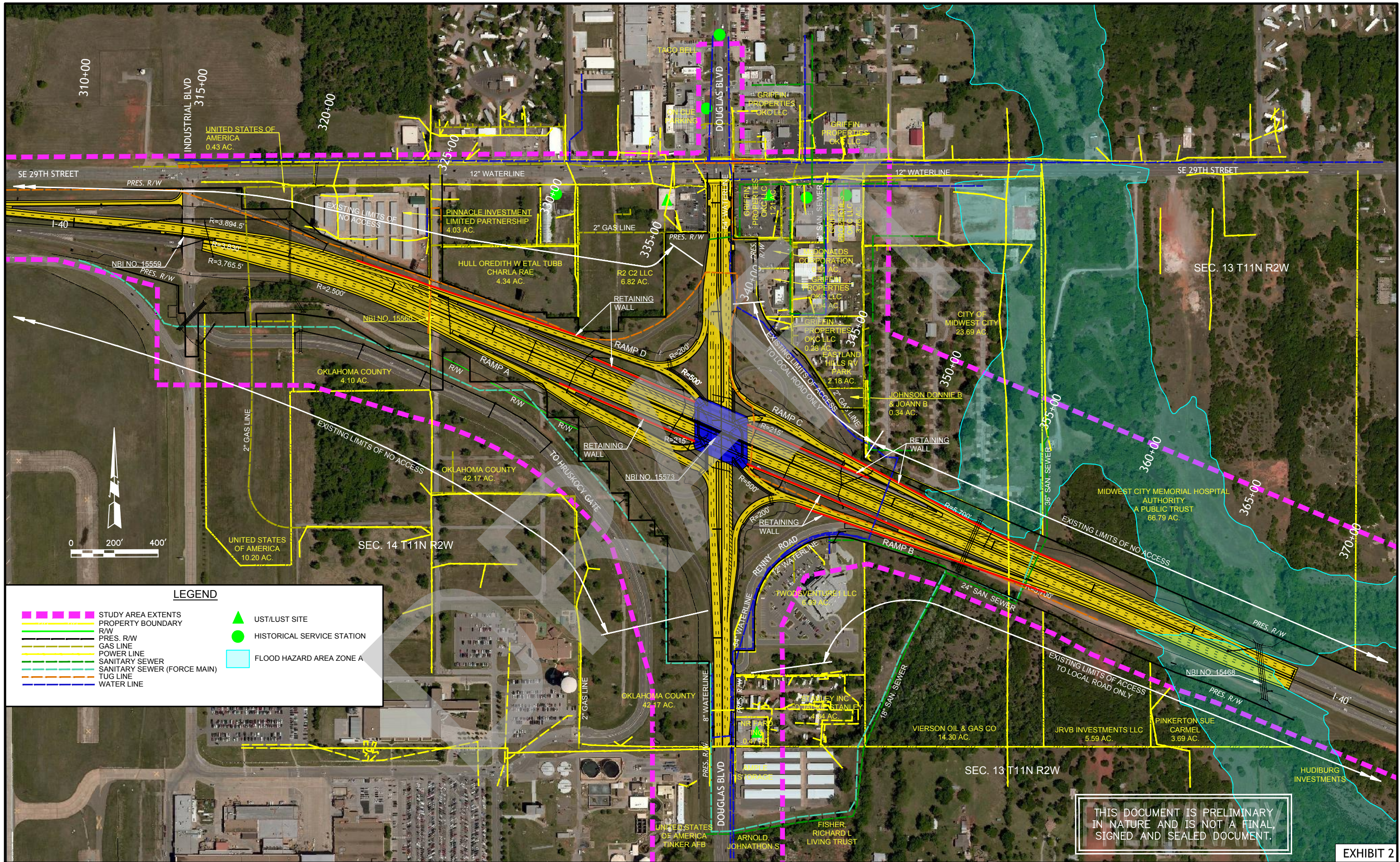


AJR



I-40 AND DOUGLAS BLVD.
INTERCHANGE
J/P 28992(04)

LOCATION MAP

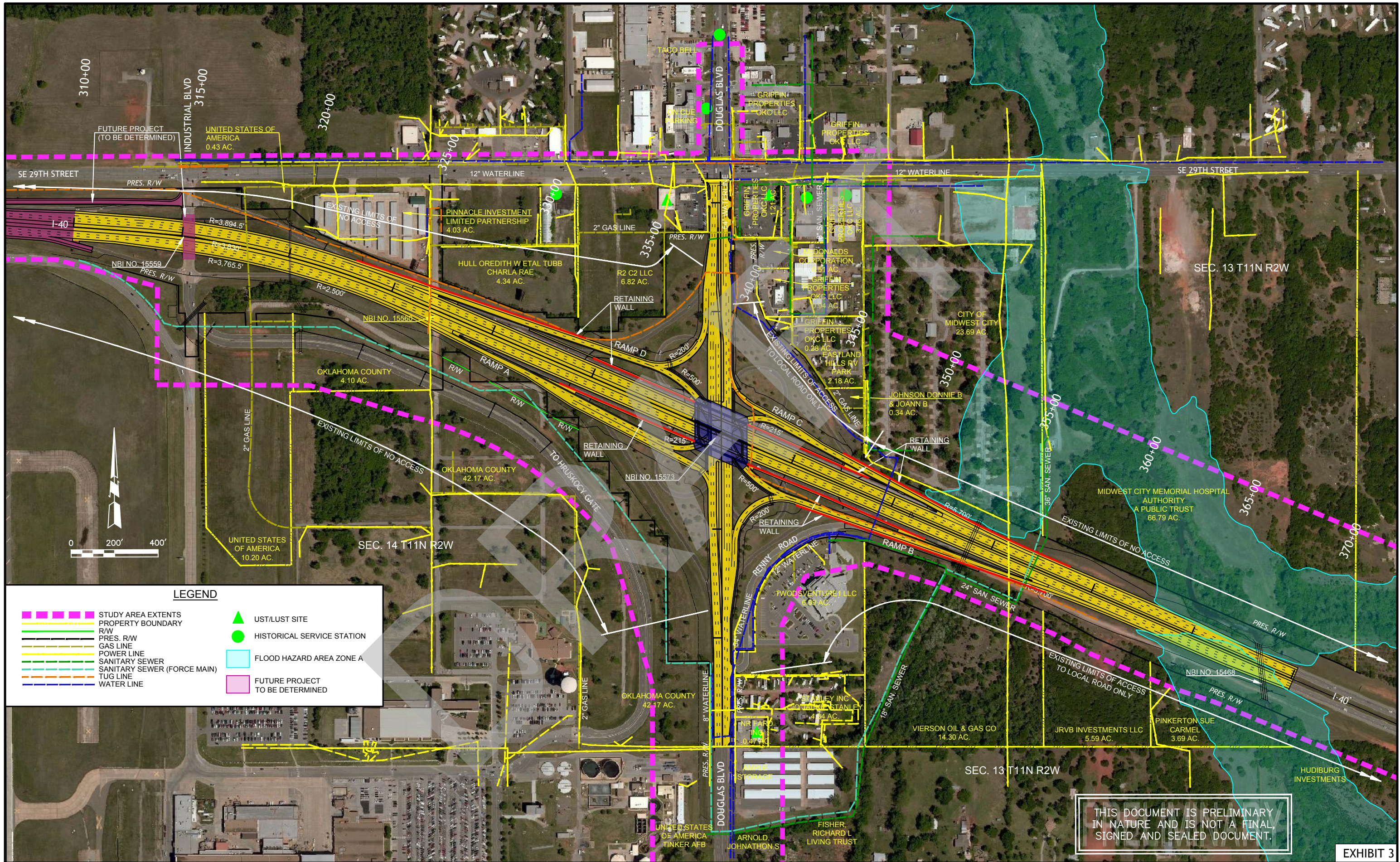


LEGEND

	STUDY AREA EXTENTS		UST/LUST SITE
	PROPERTY BOUNDARY		HISTORICAL SERVICE STATION
	R/W		FLOOD HAZARD AREA ZONE A
	PRES. R/W		
	GAS LINE		
	POWER LINE		
	SANITARY SEWER		
	SANITARY SEWER (FORCE MAIN)		
	TUG LINE		
	WATER LINE		

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

EXHIBIT 2



LEGEND

	STUDY AREA EXTENTS		UST/LUST SITE
	PROPERTY BOUNDARY		HISTORICAL SERVICE STATION
	R/W		FLOOD HAZARD AREA ZONE A
	PRES. R/W		FUTURE PROJECT TO BE DETERMINED
	GAS LINE		
	POWER LINE		
	SANITARY SEWER		
	SANITARY SEWER (FORCE MAIN)		
	TUG LINE		
	WATER LINE		

THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

EXHIBIT 3

Design Feature	I-40		Douglas Blvd.		Ramps	
<u>Functional Classification</u>	Interstate Highway		Urban Principal Arterial		Diamond	
<u>Design Speed (mph)</u>	60		45		50	
<u>ADT</u>						
Existing (2017)	58,500		28,100		9,600	
Future (2045)	84,600		48,000		16,400	
% Trucks (AADT)	15%		5%		4%	
	ODOT/ AASHTO	PROJECT SPECIFIC	ODOT/ AASHTO	PROJECT SPECIFIC	ODOT/ AASHTO	PROJECT SPECIFIC
<u>Stopping Sight Distance (K factor)</u>						
Crest	151	200	61	167	84	105
Sag	136	139	79	80	96	98
<u>Grades</u>						
Desirable Maximum-Level Terrain	3.00%	3.00%	6.00%	4.50%	5.00%	4.68%
Desirable Minimum-Level Terrain (Des/Min)	0.5/0.0%	0.50%	0.5/0.4%	0.40%	0.5/0.0%	0.97%
<u>Horizontal Curves</u>						
Min Radius	1,330'	3,830'	643'	N/A	833'	2,500'
Min Radius w/o Super	11,100'	N/A	6,480'	N/A	7,870'	N/A
<u>Pavement Cross-Slope</u>						
Mainline	2%	2%	2%	2%	2%	2%
Shoulders	4%	4%	2%	2%	2%	2%
<u>Maximum Superelevation Rate</u>	E _{MAX} = 6%	E _{MAX} = 6%	LOW SPEED URBAN	LOW SPEED URBAN	E _{MAX} = 6%	E _{MAX} = 6%
<u>Superelevation (E_s)</u>	3.8%	3.8%	NC	NC	3.8%	3.8%
<u>Lane Widths</u>	12'	12'	12'	12'	15'	15'
<u>Shoulder Widths</u>	10'	10'	2'	2'	8'	8'
<u>Horizontal Clearance (Clear Zone)</u>						
Desirable Minimum W/ 6:1	30'-32'	30'	20'-22'	20'	20'-22'	20'
Desirable Minimum W/ 4:1 to 5:1	36'-44'	N/A	24'-28'	N/A	24'-28'	N/A
<u>Approach Taper Rate (Intersection)</u>	V:1	N/A	V:1	45:1	V:1	N/A
<u>Bay Taper Length (Intersection)</u>	15:1	N/A	10:1	10:1	10:1	10:1
<u>Departure Taper Rate (Intersection)</u>	V:1	N/A	V:1	45:1	V:1	N/A
<u>Intersection Sight Distances</u>	N/A	N/A	430'	430'	N/A	N/A
<u>Decision Sight Distance</u>						
Desirable Avoidance Maneuver A	610'	627'	395'	675'	465'	750'
Desirable Avoidance Maneuver C	990'		675'		750'	
<u>Horizontal Sight Offset</u>	11'	21.5'	N/A	N/A	4'	15'
<u>Acceleration Length</u>						
V=50 mph to V=60 mph	180'	507'	N/A	N/A	180'	507'
<u>Deceleration Length</u>						
V=60 mph to V=50 mph	240'	400'	N/A	N/A	240'	400'

EXHIBIT 4: DESIGN CRITERIA FOR I-40 AND DOUGLAS BOULEVARD INTERCHANGE

I-40 will be reconstructed for a design speed of 60 mph. The vertical alignment will be lowered near the Douglas Boulevard Interchange to provide a minimum clearance of 16'-9". I-40 will be widened to six lanes with outside shoulders. A Single Point Urban Interchange (SPUI) will be constructed in place of a cloverleaf interchange.

Douglas Boulevard will transition within project extents from four to six through lanes with additional turn lanes. The design speed on Douglas Boulevard will be 45 mph. A parallel sided bridge will be utilized to accommodate the SPUI intersection. Vertical abutments will be placed at the 30' clear zone, and one pier placed on the centerline of I-40. The bridge will consist of two spans with an overall nominal length of approximately 190' and an overall bridge deck width of approximately 240'. F-shaped parapets will follow the outside edges of the bridge deck and TR3 rails will be placed along the roadway limits. Sidewalks will be accommodated across the bridge within the regions between the TR3 rails and the F-shaped parapets on both sides, with the sidewalks on the roadway portion only constructed on the east side.

The SPUI configuration will provide all ramp movements. On I-40, the design includes parallel entrance and exit ramps to the proposed Douglas Boulevard SPUI. The proposed eastbound exit ramp is 400' long interim (with an 800' ultimate design) with a 300' taper. The proposed westbound exit ramp is 778' long with a 300' taper. The proposed eastbound entrance ramp is 507' long with a 300' taper. The proposed westbound entrance ramp is 805' long interim (with a 1,280' ultimate design) with a 300' taper. The Industrial Boulevard Bridge, on the western limits of I-40, restricts a full build of the western ramp limits. After the completion of a bridge replacement on Industrial Boulevard, the ramps will be constructed to the ultimate design lengths. There are no changes to the "Existing Limits of No Access," which provide 450' or more beyond the ramp terminals on Douglas Boulevard. The access points and driveways on Douglas Boulevard will be spaced and designed to accommodate large trucks and equipment.

Additional improvements include removing the Engle Road Bridge over I-40 and removing the eastern ramps at the I-40 and Industrial Boulevard Interchange. The Engle Road Bridge is no longer in service and will be removed to accommodate the proposed Douglas Boulevard SPUI. The removal of the eastern ramps on the Industrial Boulevard Interchange reduces the access to and from I-40. The existing ramp configuration between the Industrial Boulevard and Douglas Boulevard Interchanges contains inadequate merge and diverge spacing between the interchanges. Due to the close proximity of the two interchanges, traffic that once utilized the eastern ramps on the Industrial Boulevard Interchange can utilize the Douglas Boulevard Interchange (approximately 0.5 miles east) or the Town Center Drive Interchange (approximately 1-mile west). Advance warning of the I-40 access changes will be reflected in the proposed signage for the interchange as shown on Exhibit 5.

General project extents for I-40 run from a transition beginning just west of Industrial Boulevard extending east to approximately 2,800' east of Douglas Boulevard. The existing lane configuration consists of two lanes in each direction near Douglas Boulevard. The proposed improvements will add an additional lane in each direction that lines up with other future lane widening projects along I-40. Douglas Boulevard project extents run from 1,400' south of I-40

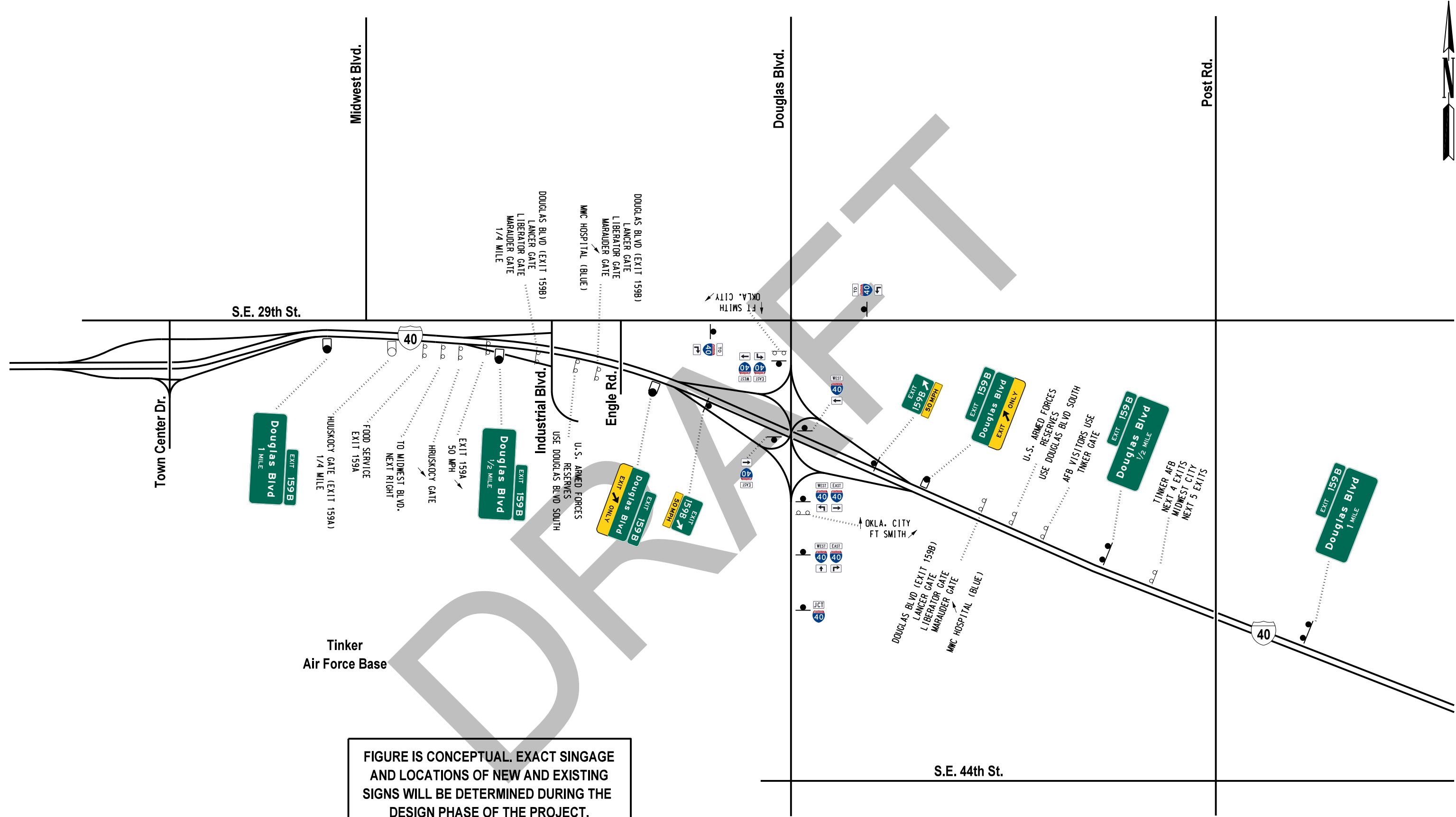


FIGURE IS CONCEPTUAL. EXACT SINGAGE AND LOCATIONS OF NEW AND EXISTING SIGNS WILL BE DETERMINED DURING THE DESIGN PHASE OF THE PROJECT.

EXHIBIT 5. Proposed Signage I-40 & Douglas Blvd.

extending north to the south edge of S.E. 29th Street. The lane configuration will widen to six driving lanes with additional turn lanes near the interchange. The improvements are within compliance of the coordination of lane balance and with basic number of lanes, see Exhibit 6.

1.2 TRAFFIC STUDY

Triad Design Group hired Traffic Engineering Consultants, Inc. (TEC) to conduct a traffic study for the I-40 and Douglas Boulevard project. TEC worked closely with the Oklahoma Department of Transportation (ODOT) in collecting the necessary traffic counts and developing the 2017 and 2045 traffic data for both the existing cloverleaf configuration and the proposed SPUI. ODOT approved the 2017 raw traffic data on October 19, 2017. To meet the FHWA/ODOT agreement that traffic data used for operational analysis should not be more than two years old, ODOT has verified that August 2018 ramp counts can be assumed to be consistent with the 2017 ramp counts. TEC also conducted an operational analysis for intersections within the study area for 2017 and 2045 traffic conditions for both the existing configuration and the proposed interchange improvements. The *Operational Study Report*, including the intersection operational analyses and freeway capacity analyses, is located in Appendix B.

1.3 OPERATIONAL ANALYSIS – EXISTING CONFIGURATION (CLOVERLEAF INTERCHANGE)

To determine the effects a transportation network modification may have, capacity analysis of the existing transportation network must be conducted and compared to a capacity analysis of the future transportation network. The study area is shown in Exhibit 1. Capacity analyses were conducted for the 2017 and 2045 Design Traffic Data with the Douglas Boulevard cloverleaf interchange to determine the level-of-service for I-40, Town Center Drive, Industrial Boulevard, Douglas Boulevard, and Anderson Road. The design traffic data with the Douglas Boulevard cloverleaf interchange utilized for the capacity analysis is shown in Exhibits 7 and 9. The overall capacity analysis results for the existing transportation network conditions with I-40 widening for 2017 and 2045 traffic volumes are shown in Exhibits 8 and 10. Widening I-40 from four lanes to six lanes allows the existing transportation network to be compared to the proposed interchange improvements solely in regard to the change in access. Printouts for all capacity analyses are located in Appendix B.

The latest edition of the *Highway Capacity Manual* was used for all freeway, ramp merge/diverge, and street traffic capacity analyses. The intersections were analyzed using *Synchro 10.0* and evaluated with the methodology of the latest edition of the *Highway Capacity Manual*.

Analyses of the existing transportation network with I-40 widening for 2017 traffic data, as shown in Exhibit 8, indicate the intersections operating at a level-of-service E or better, with the I-40 freeway and the I-40 ramp merge and diverge locations operating at a level-of-service C or better in 2017. Analyses of the existing transportation network with I-40 widening for 2045 traffic data, as shown in Exhibit 10, indicate the intersections operating at a level-of-service F or better, with the I-40 freeway and the I-40 ramp merge and diverge locations operating at a level-of-service F in 2045.



CURVE DATA
 RAMP D
 CURVE NO. D-1
 P.I. STA. 317+92.78
 Δ = 014°30'15.50"
 R = 3894.5000'
 D = 001°28'16.31"
 T = 495.5917'
 L = 985.8845'
 Ch = 983.2542'
 E = 31.4064'
 e = 0.06'/"
 S = 0.038'/"
 V = 60 mi/h

CURVE DATA
 RAMP D
 CURVE NO. D-1
 P.I. STA. 317+92.78
 Δ = 014°30'15.50"
 R = 3894.5000'
 D = 001°28'16.31"
 T = 495.5917'
 L = 985.8845'
 Ch = 983.2542'
 E = 31.4064'
 e = 0.06'/"
 S = 0.038'/"
 V = 60 mi/h

CURVE DATA
 RAMP D
 CURVE NO. D-2
 P.I. STA. 341+03.19
 Δ = 071°04'19.89"
 R = 500.0000'
 D = 011°27'32.96"
 T = 357.1220'
 L = 620.2219'
 Ch = 581.2157'
 E = 114.4397'

CURVE DATA
 RAMP D1
 CURVE NO. D1-1
 P.I. STA. 339+98.43
 Δ = 107°51'16.28"
 R = 200.0000'
 D = 028°38'52.40"
 T = 274.5427'
 L = 376.4833'
 Ch = 323.3080'
 E = 139.6671'

CURVE DATA
 RAMP C1
 CURVE NO. C1-1
 P.I. STA. 341+36.29
 Δ = 061°29'46.94"
 R = 200.0000'
 D = 028°38'52.40"
 T = 118.9789'
 L = 214.6628'
 Ch = 204.5063'
 E = 32.7144'

CURVE DATA
 RAMP C
 CURVE NO. C-1
 P.I. STA. 342+88.40
 Δ = 118°30'13.06"
 R = 215.0000'
 D = 026°38'57.12"
 T = 361.4086'
 L = 444.6799'
 Ch = 369.5517'
 E = 205.5248'

CURVE DATA
 RAMP C
 CURVE NO. C-2
 P.I. STA. 354+72.94
 Δ = 005°00'00.00"
 R = 5700.0000'
 D = 001°00'18.68"
 T = 248.8674'
 L = 497.4188'
 Ch = 497.2610'
 E = 5.4303'
 e = 0.06'/"
 S = 0.02'/"
 V = 50 mi/h

CURVE DATA
 I-40
 CURVE NO. I-40-1
 P.I. STA. 319+40.86
 Δ = 019°04'48.46"
 R = 3830.0000'
 D = 001°29'45.50"
 T = 643.6756'
 L = 1275.4324'
 Ch = 1269.5472'
 E = 53.7119'
 e = 0.06'/"
 S = 0.038'/"
 V = 60 mi/h

CURVE DATA
 I-40
 CURVE NO. I-40-2
 P.I. STA. 319+40.86
 Δ = 019°04'48.46"
 R = 3830.0000'
 D = 001°29'45.50"
 T = 643.6756'
 L = 1275.4324'
 Ch = 1269.5472'
 E = 53.7119'
 e = 0.06'/"
 S = 0.038'/"
 V = 60 mi/h

CURVE DATA
 RAMP A
 CURVE NO. A-1
 P.I. STA. 318+96.02
 Δ = 012°09'29.05"
 R = 3765.5000'
 D = 001°31'17.75"
 T = 401.0224'
 L = 799.0329'
 Ch = 797.5346'
 E = 21.2941'
 e = 0.06'/"
 S = 0.038'/"
 V = 60 mi/h

CURVE DATA
 RAMP A
 CURVE NO. A-2
 P.I. STA. 324+68.04
 Δ = 007°57'46.23"
 R = 2500.0000'
 D = 002°17'30.59"
 T = 174.0024'
 L = 347.4445'
 Ch = 347.1650'
 E = 6.0481'
 e = 0.06'/"
 S = 0.038'/"
 V = 50 mi/h

CURVE DATA
 RAMP A
 CURVE NO. A-3
 P.I. STA. 342+55.03
 Δ = 117°30'13.31"
 R = 215.0000'
 D = 026°38'57.12"
 T = 354.3348'
 L = 440.9277'
 Ch = 367.6193'
 E = 199.4613'

CURVE DATA
 RAMP A1
 CURVE NO. A1-1
 P.I. STA. 341+60.90
 Δ = 062°29'46.90"
 R = 125.0000'
 D = 045°50'11.85"
 T = 75.8464'
 L = 136.3459'
 Ch = 129.6865'
 E = 21.2111'

CURVE DATA
 RAMP B
 CURVE NO. B-1
 P.I. STA. 342+90.95
 Δ = 070°33'06.40"
 R = 500.0000'
 D = 011°27'32.96"
 T = 353.7039'
 L = 615.6804'
 Ch = 577.5141'
 E = 112.4594'

CURVE DATA
 RAMP B1
 CURVE NO. B1-1
 P.I. STA. 344+84.44
 Δ = 109°26'53.60"
 R = 200.0000'
 D = 028°38'52.40"
 T = 282.7223'
 L = 382.0464'
 Ch = 326.5523'
 E = 146.3119'

CURVE DATA
 RAMP B
 CURVE NO. B-2
 P.I. STA. 359+90.65
 Δ = 004°03'19.47"
 R = 5700.0000'
 D = 001°00'18.68"
 T = 201.8079'
 L = 403.4472'
 Ch = 403.3630'
 E = 3.5714'
 e = 0.06'/"
 S = 0.024'/"
 V = 55 mi/h

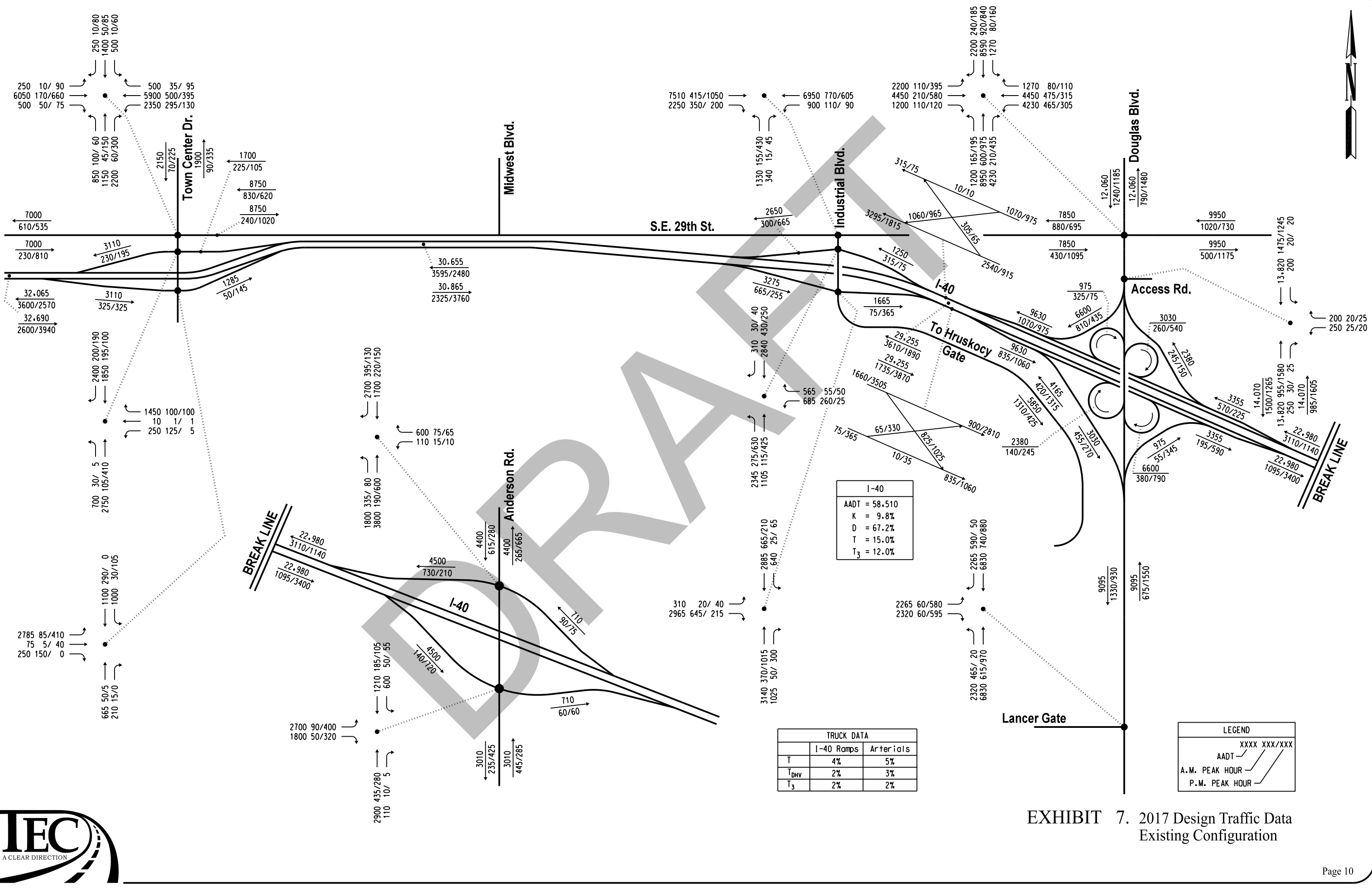
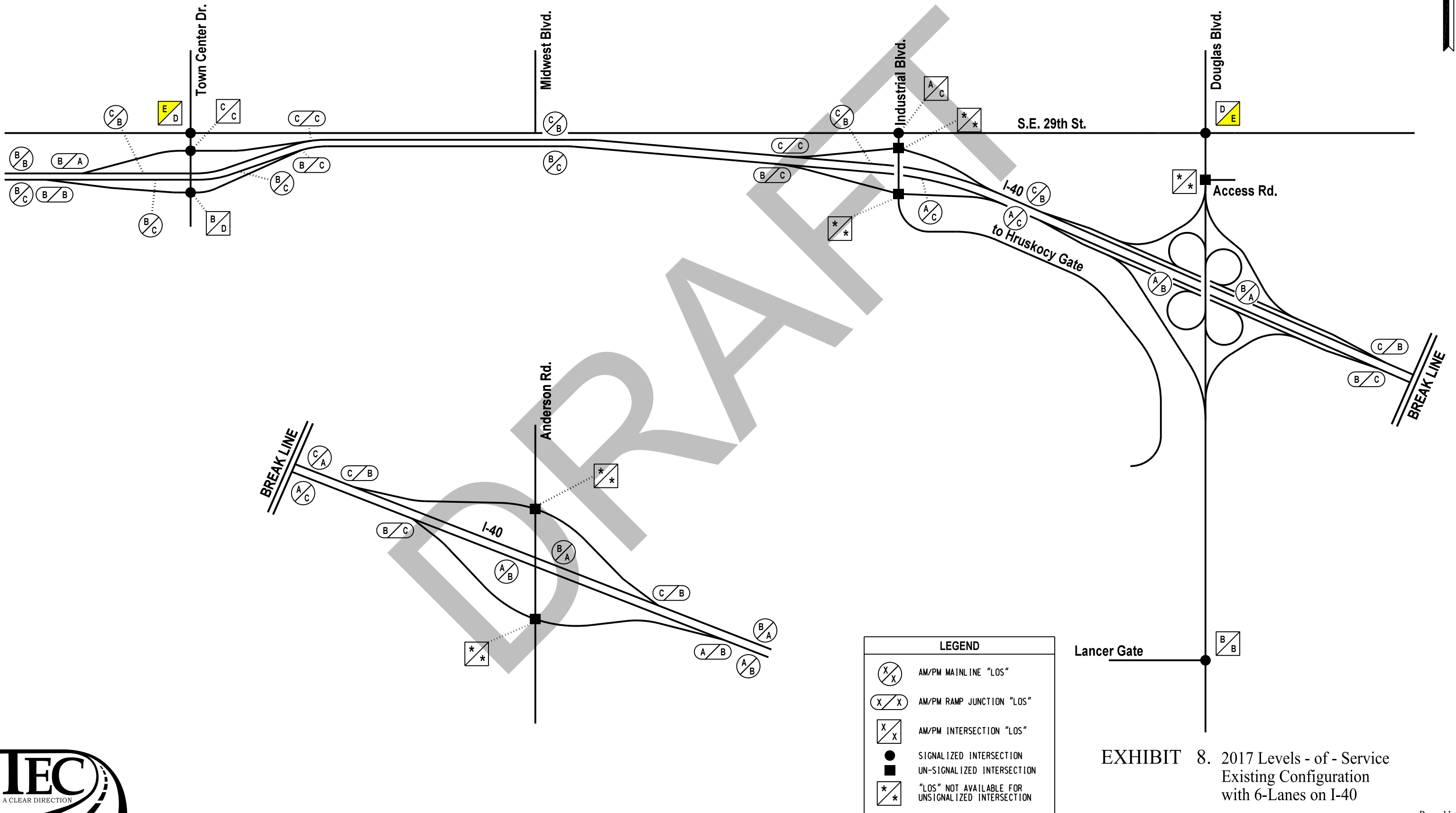


EXHIBIT 7. 2017 Design Traffic Data Existing Configuration

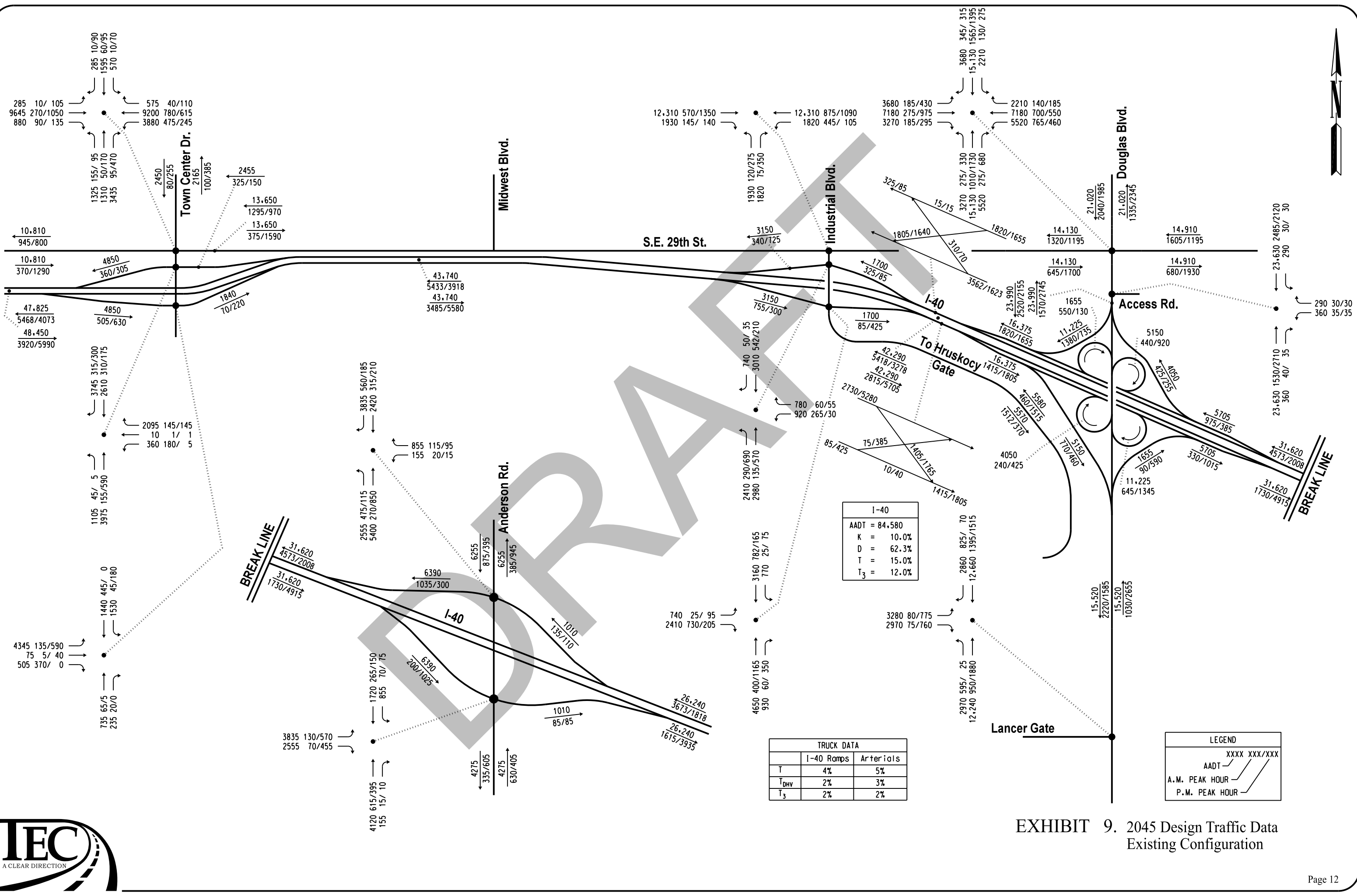


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LEGEND	
	AM/PM MAINLINE "LOS"
	AM/PM RAMP JUNCTION "LOS"
	AM/PM INTERSECTION "LOS"
	SIGNALIZED INTERSECTION
	UN-SIGNALIZED INTERSECTION
	"LOS" NOT AVAILABLE FOR UNSIGNALIZED INTERSECTION

EXHIBIT 8. 2017 Levels - of - Service Existing Configuration with 6-Lanes on I-40



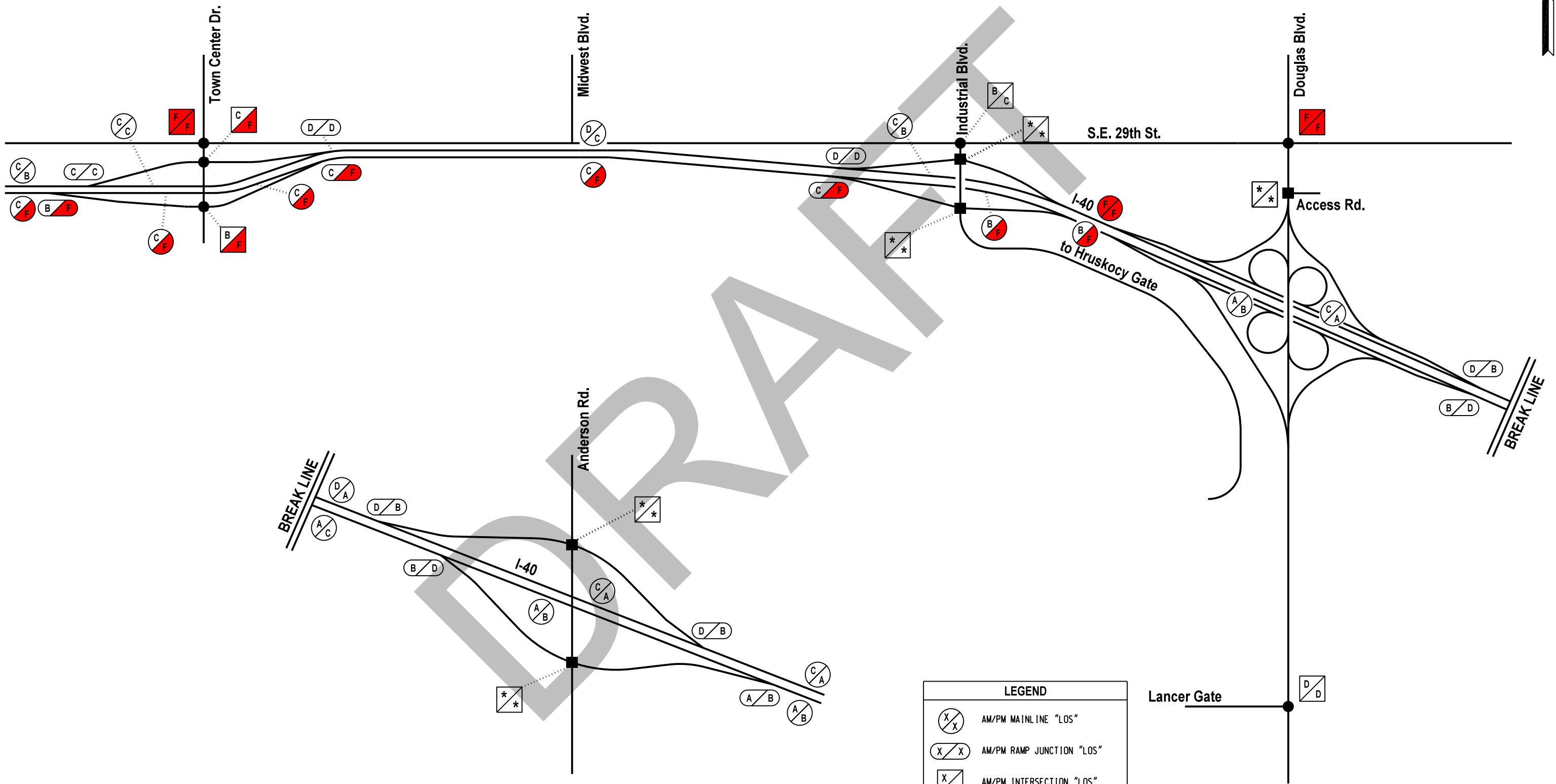
I-40	
AADT	= 84,580
K	= 10.0%
D	= 62.3%
T	= 15.0%
T ₃	= 12.0%

TRUCK DATA		
	I-40 Ramps	Arterials
T	4%	5%
T _{DHV}	2%	3%
T ₃	2%	2%

LEGEND	
XXXX XXX/XXX	AADT
—	A.M. PEAK HOUR
—	P.M. PEAK HOUR

EXHIBIT 9. 2045 Design Traffic Data Existing Configuration





LEGEND	
	AM/PM MAINLINE "LOS"
	AM/PM RAMP JUNCTION "LOS"
	AM/PM INTERSECTION "LOS"
	SIGNALIZED INTERSECTION
	UN-SIGNALIZED INTERSECTION
	"LOS" NOT AVAILABLE FOR UNSIGNALIZED INTERSECTION

EXHIBIT 10. 2045 Levels - of - Service Existing Configuration with 6-lanes on I-40



1.4 OPERATIONAL ANALYSIS – FUTURE CONFIGURATION (SPUI)

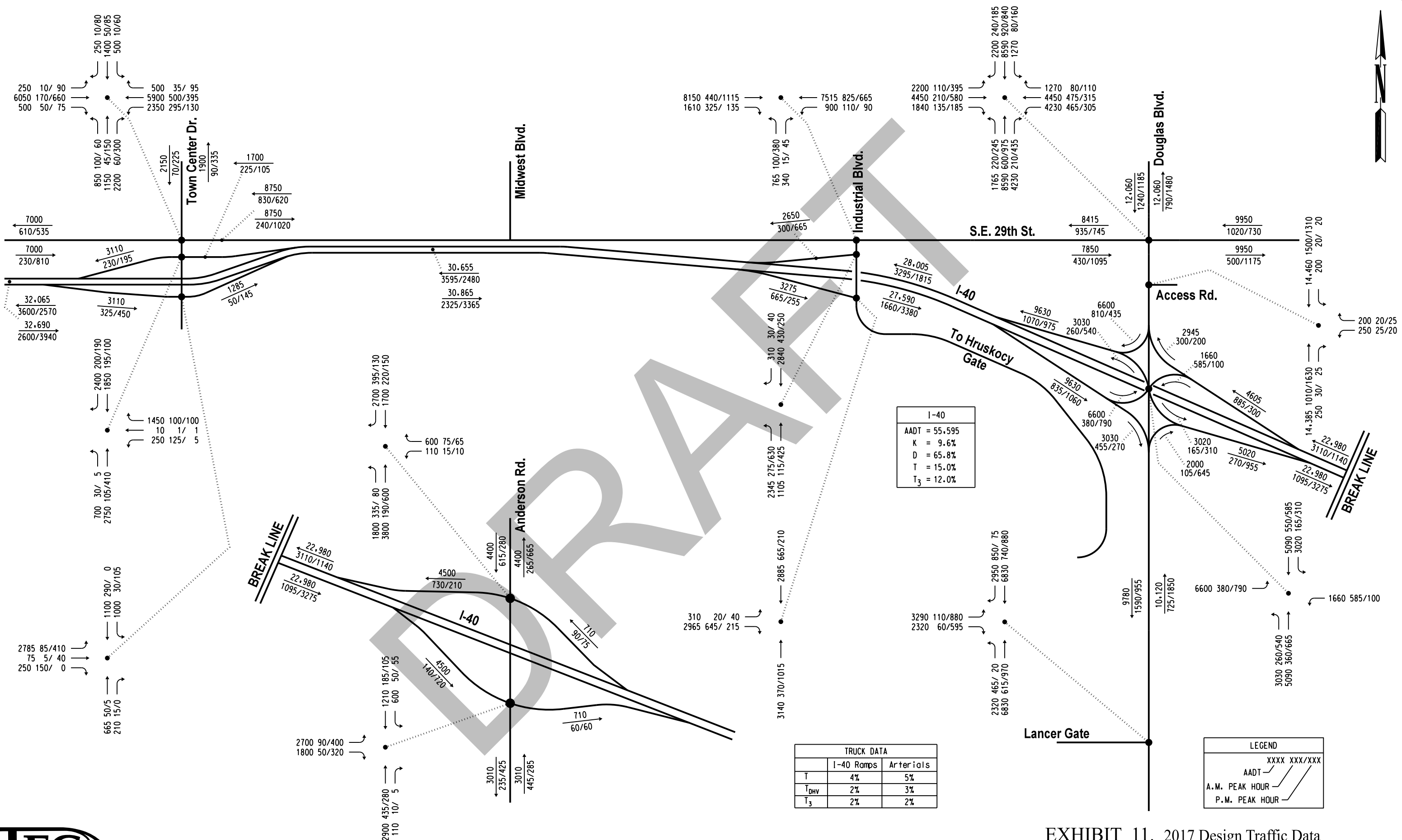
Capacity analyses were conducted for the 2017 and 2045 Design Traffic Data with the Douglas Boulevard SPUI to determine the level-of-service for I-40, Town Center Drive, Industrial Boulevard, Douglas Boulevard, and Anderson Road. The design traffic data with the Douglas Boulevard SPUI utilized for the capacity analysis is shown in Exhibits 11 and 13. The overall capacity analysis results for future transportation network conditions for 2017 and 2045 traffic volumes are shown in Exhibits 12 and 14. Printouts for all capacity analyses are located in Appendix B.

Analyses of the future transportation network for 2017 traffic data, as shown in Exhibit 12, indicate the intersections operating at a level-of-service E or better, with the I-40 freeway and the I-40 ramp merge and diverge locations operating at a level-of-service C or better in 2017. Analyses of the future transportation network for 2045 traffic data, as shown in Exhibit 14, indicate the intersections operating at a level-of-service F or better, with the I-40 freeway and the I-40 ramp merge and diverge locations operating at a level-of-service F or better in 2045.

An intersection delay comparison between the existing cloverleaf interchange configuration with I-40 widening and the future SPUI configuration is located in Exhibit 15 for the design year 2017 and Exhibit 16 for the design year 2045. A freeway segment comparison between the existing cloverleaf interchange configuration with I-40 widening and the future SPUI configuration is located in Exhibit 17 for the design year 2017 and Exhibit 18 for the design year 2045. A freeway segment comparison between the existing cloverleaf interchange configuration without I-40 widening and the future SPUI configuration for the design years 2017 and 2045 is located in Appendix C.

Overall the intersection delay comparison results, displayed in Exhibits 15 and 16, reveal two generalities. First, the future SPUI configuration generates improvement to the intersection delay along Industrial Boulevard for both signalized and unsignalized intersections. Second, the total signalized delay is an average 40% greater with the future SPUI configuration. The increase may be attributed to the addition of four signals and the additional traffic from the removed Industrial Boulevard ramps displaced onto Douglas Boulevard.

The 2017 freeway facilities comparison results, summarized in Exhibit 17, display several modest improvements to the I-40 freeway and the I-40 ramp merge and diverge locations with the future SPUI configuration in comparison to the existing cloverleaf interchange configuration with I-40 widening. The 2045 freeway facilities comparison results, summarized in Exhibit 18, display improvements in level-of-service at the weaving segment between Industrial Boulevard and Douglas Boulevard.



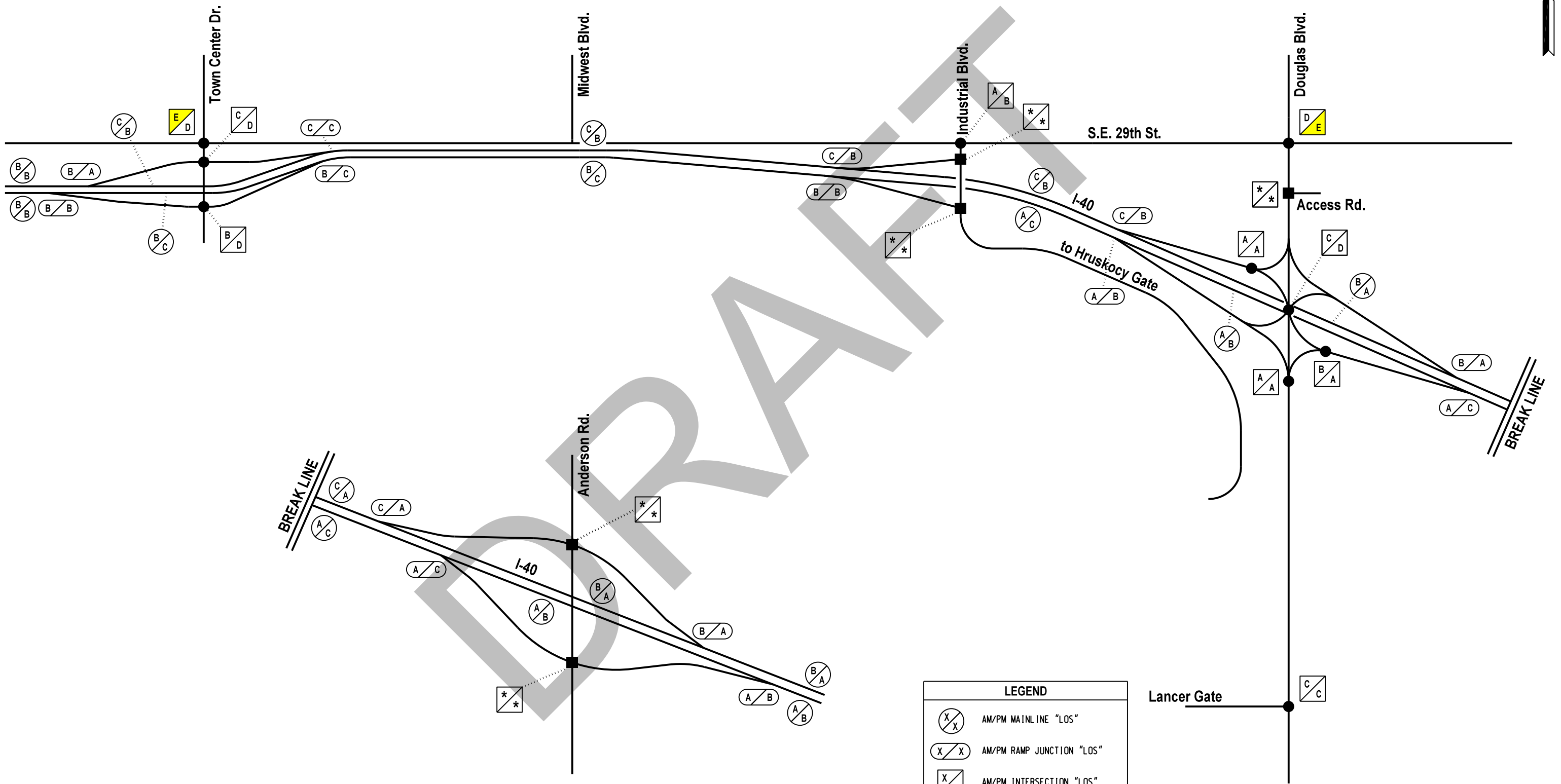
I-40	
AADT	= 55,595
K	= 9.6%
D	= 65.8%
T	= 15.0%
T ₃	= 12.0%

TRUCK DATA		
	I-40 Ramps	Arterials
T	4%	5%
T _{DHV}	2%	3%
T ₃	2%	2%

LEGEND	
XXXX XXX/XXX	AADT
—	A.M. PEAK HOUR
—	P.M. PEAK HOUR

EXHIBIT 11. 2017 Design Traffic Data Future Configuration





LEGEND	
	AM/PM MAINLINE "LOS"
	AM/PM RAMP JUNCTION "LOS"
	AM/PM INTERSECTION "LOS"
	SIGNALIZED INTERSECTION
	UN-SIGNALIZED INTERSECTION
	"LOS" NOT AVAILABLE FOR UNSIGNALIZED INTERSECTION

EXHIBIT 12. 2017 Levels - of - Service Future Configuration

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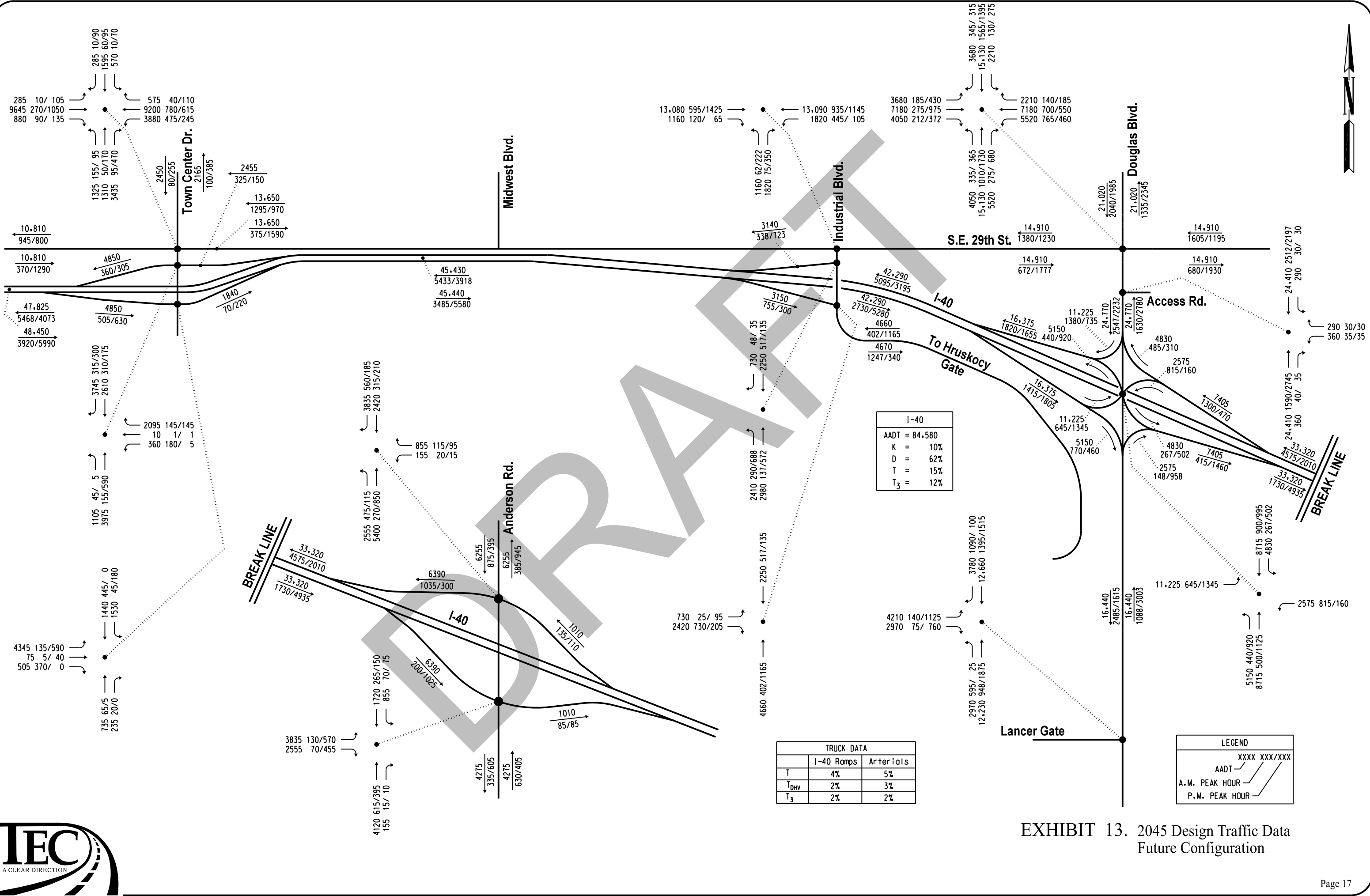
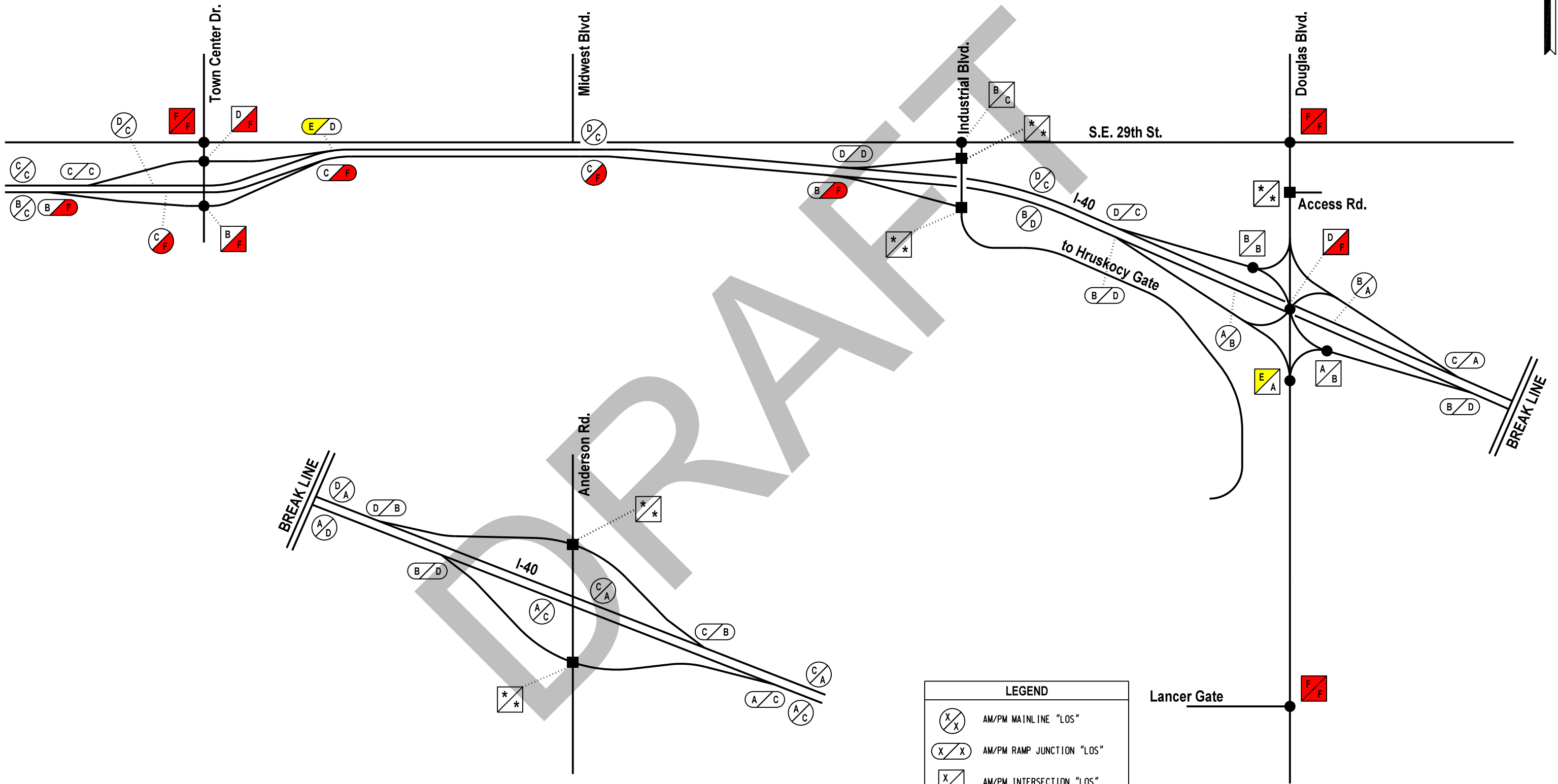


EXHIBIT 13. 2045 Design Traffic Data Future Configuration





LEGEND	
	AM/PM MAINLINE "LOS"
	AM/PM RAMP JUNCTION "LOS"
	AM/PM INTERSECTION "LOS"
	SIGNALIZED INTERSECTION
	UN-SIGNALIZED INTERSECTION
	"LOS" NOT AVAILABLE FOR UNSIGNALIZED INTERSECTION

EXHIBIT 14. 2045 Levels - of - Service Future Configuration



Intersection Delay: 2017 AM Peak									
Intersections	Existing Geometry				Future Geometry				
	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (veh-hr)	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (veh-hr)	
Signalized Intersections									
Town Center Dr. & S. E. 29th St.	64	E	23.6	62	E	22.9			
Town Center Dr. & I-40 WB Ramps	21	C	4.4	27	C	5.7			
Town Center Dr. & I-40 EB Ramps	15	B	2.5	15	B	2.5			
Industrial Blvd. & S.E. 29th St.	7	A	3.6	6	A	2.9			
Douglas Blvd. & S.E. 29th St.	44	D	44.6	45	D	46.9			
Douglas Blvd. & SPUJ Intersection				28	C	18.1			
Douglas Blvd. SBR to I-40 WB Ramp				7	A	2.1			
Douglas Blvd. NBR to I-40 EB Ramp				14	B	1.1			
Douglas Blvd. & I-40 Off Ramp EBR				9	A	5.7			
Douglas Blvd. & Lancer Gate	19	B	13.1	34	C	27.0			
Total Signalized Delay (veh-hr)	92								
Unsignalized Intersections									
(Critical Approach (sec/veh) & Overall Intersection (veh-hr))									
Industrial Blvd. & I-40 WB Ramps	ERROR	F	ERROR	7	A	0.8			
Industrial Blvd. & I-40 EB Ramps	ERROR	F	ERROR	ERROR	F	ERROR			
Douglas Blvd. & Access Rd.	39	E	0.6	17	C	0.4			
Anderson Rd. & I-40 WB Ramps	17	C	1.5	17	C	1.5			
Anderson Rd. & I-40 EB Ramps	20	C	0.9	20	C	0.9			
Total Unsignalized Delay (veh-hr)	3 *								
Total Signalized Delay (veh-hr)	135								

Intersection Delay: 2017 PM Peak									
Intersections	Existing Geometry				Future Geometry				
	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (veh-hr)	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (veh-hr)	
Signalized Intersections									
Town Center Dr. & S. E. 29th St.	42	D	25.2	41	D	25.1			
Town Center Dr. & I-40 WB Ramps	35	C	7.8	36	D	8.1			
Town Center Dr. & I-40 EB Ramps	50	D	7.7	50	D	7.7			
Industrial Blvd. & S.E. 29th St.	22	C	14.6	19	B	12.8			
Douglas Blvd. & S.E. 29th St.	64	E	82.4	68	E	89.6			
Douglas Blvd. & SPUJ Intersection				43	D	35.7			
Douglas Blvd. SBR to I-40 WB Ramp				6	A	1.6			
Douglas Blvd. NBR to I-40 EB Ramp				8	A	2.0			
Douglas Blvd. & I-40 Off Ramp EBR				3	A	2.4			
Douglas Blvd. & Lancer Gate	16	B	13.5	20	C	19.3			
Total Signalized Delay (veh-hr)	151								
Unsignalized Intersections									
(Critical Approach (sec/veh) & Overall Intersection (veh-hr))									
Industrial Blvd. & I-40 WB Ramps	ERROR	F	ERROR	7	A	2.1			
Industrial Blvd. & I-40 EB Ramps	14	B	1.4	13	B	0.9			
Douglas Blvd. & Access Rd.	193	F	2.7	15	C	0.4			
Anderson Rd. & I-40 WB Ramps	16	C	0.5	16	C	0.5			
Anderson Rd. & I-40 EB Ramps	203	F	40.7	203	F	40.7			
Total Unsignalized Delay (veh-hr)	45 *								
Total Signalized Delay (veh-hr)	204								

EXHIBIT 15: INTERSECTION DELAY - 2017

*Delays for some intersections not able to be calculated. Total delay likely to be higher.

Intersection Delay: 2045 AM Peak									
Intersections	Existing Geometry				Future Geometry				
	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (sec/veh)	LOS	Delay (veh-hr)	Delay (sec/veh)	LOS	Delay (veh-hr)
Signalized Intersections									
Town Center Dr. & S. E. 29th St.	108	F	61.1	95	F	54.0			
Town Center Dr. & I-40 WB Ramps	28	C	8.9	52	D	16.8			
Town Center Dr. & I-40 EB Ramps	17	B	5.0	17	B	5.0			
Industrial Blvd. & S.E. 29th St.	16	B	10.0	12	B	7.6			
Douglas Blvd. & S.E. 29th St.	140	F	226.7	149	F	244.9			
Douglas Blvd. & SPUJ Intersection				45	D	44.6			
Douglas Blvd. SBR to I-40 WB Ramp		Does Not Exist		13	B	6.7			
Douglas Blvd. NBR to I-40 EB Ramp		Does Not Exist		3	A	0.4			
Douglas Blvd. & I-40 Off Ramp EBR		Does Not Exist		67	E	66.0			
Douglas Blvd. & Lancer Gate	51	D	55.8	85	F	100.3			
Total Signalized Delay (veh-hr)					367				
Unsignalized Intersections									
(Critical Approach (sec/veh) & Overall Intersection (veh-hr))									
Industrial Blvd. & I-40 WB Ramps			ERROR	F	ERROR	7	A	0.9	
Industrial Blvd. & I-40 EB Ramps			ERROR	F	ERROR	ERROR	F	ERROR	
Douglas Blvd. & Access Rd.			ERROR	F	ERROR	47	E	1.6	
Anderson Rd. & I-40 WB Ramps			97	F	6.6	97	F	6.6	
Anderson Rd. & I-40 EB Ramps			83	F	4.8	83	F	4.8	
Total Unsignalized Delay (veh-hr)					11 *				
Signalized Intersections									
Town Center Dr. & S. E. 29th St.	151	F	136.0	139	F	125.5			
Town Center Dr. & I-40 WB Ramps	81	F	27.4	100	F	34.0			
Town Center Dr. & I-40 EB Ramps	137	F	31.1	137	F	31.1			
Industrial Blvd. & S.E. 29th St.	22	C	20.6	21	C	19.1			
Douglas Blvd. & S.E. 29th St.	276	F	584.6	289	F	620.1			
Douglas Blvd. & SPUJ Intersection				121	F	170.1			
Douglas Blvd. SBR to I-40 WB Ramp		Does Not Exist		13	B	6.0			
Douglas Blvd. NBR to I-40 EB Ramp		Does Not Exist		10	B	4.2			
Douglas Blvd. & I-40 Off Ramp EBR		Does Not Exist		7	A	8.3			
Douglas Blvd. & Lancer Gate	53	D	74.1	80	F	120.2			
Total Signalized Delay (veh-hr)					874				
Unsignalized Intersections									
(Critical Approach (sec/veh) & Overall Intersection (veh-hr))									
Industrial Blvd. & I-40 WB Ramps			ERROR	F	ERROR	6	A	2.1	
Industrial Blvd. & I-40 EB Ramps			25	D	2.6	14	B	1.2	
Douglas Blvd. & Access Rd.			ERROR	F	ERROR	ERROR	F	ERROR	
Anderson Rd. & I-40 WB Ramps			31	D	1.2	31	D	1.2	
Anderson Rd. & I-40 EB Ramps			ERROR	F	ERROR	ERROR	F	ERROR	
Total Unsignalized Delay (veh-hr)					4 *				

EXHIBIT 16: INTERSECTION DELAY - 2045

*Delays for some intersections not able to be calculated. Total delay likely to be higher.

Freeway Facilities: 2017 AM Peak - Westbound			
Existing Configuration - Extra L40 Lane		Future Configuration	
Segment	Type	LOS	LOS
Study Limit to Anderson Off	Basic	B	B
Anderson Off	Diverge	C	Diverge
Anderson Off to Anderson On	Basic	B	B
Anderson On	Merge	C	Merge
Anderson On to Douglas Off	Basic	C	Anderson On to Douglas Off
Douglas Off	Diverge	C	Diverge
Douglas Off to Douglas On	Basic	B	Douglas Off to Douglas On
Douglas On to Industrial Off	Weaving	C	Douglas On
Industrial Off to Industrial On	Basic	C	Douglas On to Industrial On
Industrial On	Merge	C	Industrial On
Industrial On to Town Center Off	Basic	C	Industrial On to Town Center Off
Town Center Off	Diverge	C	Town Center Off
Town Center Off to Town Center On	Basic	C	Town Center Off to Town Center On
Town Center On	Merge	B	Town Center On
Town Center On to Study Limit	Basic	B	Town Center On to Study Limit

Freeway Facilities: 2017 PM Peak - Westbound			
Existing Configuration - Extra L40 Lane		Future Configuration	
Segment	Type	LOS	LOS
Study Limit to Anderson Off	Basic	A	Study Limit to Anderson Off
Anderson Off	Diverge	B	Anderson Off
Anderson Off to Anderson On	Basic	A	Anderson Off to Anderson On
Anderson On	Merge	B	Anderson On
Anderson On to Douglas Off	Basic	A	Anderson On to Douglas Off
Douglas Off	Diverge	B	Douglas Off
Douglas Off to Douglas On	Basic	A	Douglas Off to Douglas On
Douglas On to Industrial Off	Weaving	B	Douglas On
Industrial Off to Industrial On	Basic	B	Douglas On to Industrial On
Industrial On	Merge	C	Industrial On
Industrial On to Town Center Off	Basic	B	Industrial On to Town Center Off
Town Center Off	Diverge	C	Town Center Off
Town Center Off to Town Center On	Basic	B	Town Center Off to Town Center On
Town Center On	Merge	A	Town Center On
Town Center On to Study Limit	Basic	B	Town Center On to Study Limit

Freeway Facilities: 2017 AM Peak - Eastbound			
Existing Configuration - Extra L40 Lane		Future Configuration	
Segment	Type	LOS	LOS
Study Limit to Town Center Off	Basic	B	B
Town Center Off	Diverge	B	Diverge
Town Center Off to Lane Drop	Basic	B	B
Lane Drop to Town Center On	Basic	B	Town Center Off to Town Center On
Town Center On	Merge	B	Town Center On
Town Center On to Industrial Off	Basic	B	Town Center On to Industrial Off
Industrial Off	Diverge	B	Industrial Off
Industrial Off to Industrial On	Basic	A	Industrial Off to Douglas Off
Industrial On to Douglas Off	Weave	A	Douglas Off
Douglas Off to Douglas On	Basic	A	Douglas Off to Douglas On
Douglas On	Merge	B	Douglas On
Douglas On to Anderson Off	Basic	A	Douglas On to Anderson Off
Anderson Off	Diverge	B	Anderson Off
Anderson Off to Anderson On	Basic	A	Anderson Off to Anderson On
Anderson On	Merge	A	Anderson On
Anderson On to Study Limit	Basic	A	Anderson On to Study Limit

Freeway Facilities: 2017 PM Peak - Eastbound			
Existing Configuration - Extra L40 Lane		Future Configuration	
Segment	Type	LOS	LOS
Study Limit to Town Center Off	Basic	C	Study Limit to Town Center Off
Town Center Off	Diverge	B	Town Center Off
Town Center Off to Lane Drop	Basic	C	Town Center Off to Town Center On
Lane Drop to Town Center On	Basic	C	Town Center On
Town Center On	Merge	C	Town Center On
Town Center On to Industrial Off	Basic	C	Town Center On to Industrial Off
Industrial Off	Diverge	C	Industrial Off
Industrial Off to Industrial On	Basic	C	Industrial Off to Douglas Off
Industrial On to Douglas Off	Weave	C	Douglas Off
Douglas Off to Douglas On	Basic	B	Douglas Off to Douglas On
Douglas On	Merge	C	Douglas On
Douglas On to Anderson Off	Basic	C	Douglas On to Anderson Off
Anderson Off	Diverge	C	Anderson Off
Anderson Off to Anderson On	Basic	B	Anderson Off to Anderson On
Anderson On	Merge	B	Anderson On
Anderson On to Study Limit	Basic	B	Anderson On to Study Limit

EXHIBIT 17: FREEWAY FACILITIES - 2017

Freeway Facilities: 2045 AM Peak - Westbound					
Existing Configuration - Extra 1-40 Lane			Future Configuration		
Segment	Type	LOS	Segment	Type	LOS
Study Limit to Anderson Off	Basic	C	Study Limit to Anderson Off	Basic	C
Anderson Off	Diverge	D	Anderson Off	Diverge	C
Anderson Off to Anderson On	Basic	C	Anderson Off to Anderson On	Basic	C
Anderson On	Merge	D	Anderson On	Merge	D
Anderson On to Douglas Off	Basic	D	Anderson On to Douglas Off	Basic	D
Douglas Off	Diverge	D	Douglas Off	Diverge	C
Douglas Off to Douglas On	Basic	C	Douglas Off to Douglas On	Basic	B
Douglas On to Industrial Off	Weaving	F	Douglas On	Merge	D
Industrial Off to Industrial On	Basic	C	Douglas On to Industrial On	Basic	D
Industrial On	Merge	D	Industrial On	Merge	D
Industrial On to Town Center Off	Basic	D	Industrial On to Town Center Off	Basic	D
Town Center Off	Diverge	D	Town Center Off	Diverge	E
Town Center Off to Town Center On	Basic	C	Town Center Off to Town Center On	Basic	D
Town Center On	Merge	C	Town Center On	Merge	C
Town Center On to Study Limit	Basic	C	Town Center On to Study Limit	Basic	C

Freeway Facilities: 2045 PM Peak - Westbound					
Existing Configuration - Extra 1-40 Lane			Future Configuration		
Segment	Type	LOS	Segment	Type	LOS
Study Limit to Anderson Off	Basic	A	Study Limit to Anderson Off	Basic	A
Anderson Off	Diverge	B	Anderson Off	Diverge	B
Anderson Off to Anderson On	Basic	A	Anderson Off to Anderson On	Basic	A
Anderson On	Merge	B	Anderson On	Merge	B
Anderson On to Douglas Off	Basic	A	Anderson On to Douglas Off	Basic	A
Douglas Off	Diverge	B	Douglas Off	Diverge	A
Douglas Off to Douglas On	Basic	A	Douglas Off to Douglas On	Basic	A
Douglas On to Industrial Off	Weaving	F	Douglas On	Merge	C
Industrial Off to Industrial On	Basic	B	Douglas On to Industrial On	Basic	C
Industrial On	Merge	D	Industrial On	Merge	D
Industrial On to Town Center Off	Basic	C	Industrial On to Town Center Off	Basic	C
Town Center Off	Diverge	D	Industrial On to Town Center Off	Diverge	D
Town Center Off to Town Center On	Basic	C	Town Center Off to Town Center On	Basic	C
Town Center On	Merge	C	Town Center On	Merge	C
Town Center On to Study Limit	Basic	B	Town Center On to Study Limit	Basic	C

Freeway Facilities: 2045 AM Peak - Eastbound					
Existing Configuration - Extra 1-40 Lane			Future Configuration		
Segment	Type	LOS	Segment	Type	LOS
Study Limit to Town Center Off	Basic	C	Study Limit to Town Center Off	Basic	B
Town Center Off	Diverge	B	Town Center Off	Diverge	B
Town Center Off to Lane Drop	Basic	C	Town Center Off to Town Center On	Basic	C
Lane Drop to Town Center On	Basic	C	Town Center On	Merge	C
Town Center On	Merge	C	Town Center On to Industrial Off	Basic	C
Town Center On to Industrial Off	Basic	C	Industrial Off	Diverge	B
Industrial Off	Basic	B	Industrial Off to Douglas Off	Basic	B
Industrial Off to Industrial On	Weave	B	Douglas Off	Diverge	B
Industrial On to Douglas Off	Basic	A	Douglas Off to Douglas On	Basic	A
Douglas Off to Douglas On	Merge	B	Douglas On	Merge	B
Douglas On	Basic	A	Douglas On to Anderson Off	Basic	A
Douglas On to Anderson Off	Diverge	B	Anderson Off	Diverge	B
Anderson Off	Basic	A	Anderson Off to Anderson On	Basic	A
Anderson Off to Anderson On	Merge	A	Anderson On	Merge	A
Anderson On	Basic	A	Anderson On to Study Limit	Basic	A

Freeway Facilities: 2045 PM Peak - Eastbound					
Existing Configuration - Extra 1-40 Lane			Future Configuration		
Segment	Type	LOS	Segment	Type	LOS
Study Limit to Town Center Off	Basic	F	Study Limit to Town Center Off	Basic	C
Town Center Off	Diverge	F	Town Center Off	Diverge	F
Town Center Off to Lane Drop	Basic	F	Town Center Off to Town Center On	Basic	F
Lane Drop to Town Center On	Basic	F	Town Center On	Merge	F
Town Center On	Merge	F	Town Center On to Industrial Off	Basic	F
Town Center On to Industrial Off	Basic	F	Industrial Off	Diverge	F
Industrial Off	Basic	F	Industrial Off to Douglas Off	Basic	D
Industrial Off to Industrial On	Weave	F	Douglas Off	Diverge	D
Industrial On to Douglas Off	Basic	B	Douglas Off to Douglas On	Basic	B
Douglas Off to Douglas On	Merge	D	Douglas On	Merge	D
Douglas On	Basic	C	Douglas On to Anderson Off	Basic	D
Douglas On to Anderson Off	Diverge	D	Anderson Off	Diverge	D
Anderson Off	Basic	B	Anderson Off to Anderson On	Basic	C
Anderson Off to Anderson On	Merge	B	Anderson On	Merge	C
Anderson On	Basic	B	Anderson On to Study Limit	Basic	C

EXHIBIT 18: FREEWAY FACILITIES - 2045

1.5 DOUGLAS BOULEVARD AND S.E. 29TH STREET INTERSECTION ANALYSIS

The team worked closely with ODOT to develop VISSIM models of existing conditions for the study corridor. Over the course of development of the VISSIM models it was determined that S.E. 29th Street was a significant bottleneck within the study area. Two variations of the model were studied, one with the S.E. 29th Street intersection and one without the S.E. 29th Street intersection. Ultimately, the team determined it would be best to include the S.E. 29th Street intersection in the model. Through this study process, the existing VISSIM models with the S.E. 29th Street intersection were calibrated to a level sufficient to meet ODOT's approval.

Again, working closely with ODOT, the team created VISSIM models of the build conditions, which includes construction of three lanes along I-40 in each direction and a SPUI at the Douglas Boulevard Interchange. The models were then submitted to ODOT. The approved calibrations made in the Existing Configuration models were carried through the SPUI models. ODOT used the models to create various scenarios within the build condition models with different combinations of signal timing and network improvements along Douglas Boulevard. Through this process ODOT determined that the closely spaced intersection of S.E. 29th Street and I-40 interchange along Douglas Boulevard had a significant impact on traffic operations on the I-40 and Douglas Boulevard Interchange. The ultimate determination was that additional study should be completed on the intersection and that the study should be included in the current study process due to the proximity to the interchange.

Through collaboration with ODOT, three distinct intersection designs were developed, as shown in Appendix D: a quadrant intersection, a displaced left-turn intersection, and an improved standard intersection. Synchro models of the three intersection types were developed to determine if one solution performed better than the others. All three models were ultimately approved by ODOT. Through the Synchro study process, one solution did not show a more significant increase in performance than the others. To gain a better understanding of how each solution performed, VISSIM models of each of the intersection alternatives were created. ODOT and TEC are currently in the process of developing VISSIM models for each intersection alternative that meet ODOT's approval. The ultimate goal of this portion of the study is to determine the S.E. 29th Street alternative that creates the least impact on the I-40 and Douglas Boulevard Interchange. While the team felt it important to develop a long-term plan that works well in conjunction with the SPUI at the I-40 and Douglas Boulevard Interchange, actual work at the S.E. 29th Street intersection is expected to be conducted by a different project than the I-40 and Douglas Boulevard interchange improvement.

1.6 COLLISION ANALYSIS

A collision analysis was performed to assess the crash history from 01/01/2011 to 12/31/2015 for I-40, Douglas Boulevard, and the surrounding facilities. The collision analysis reports are located in Appendix E and are summarized in the following text.

I-40 (Between Town Center Drive and Anderson Road)

Throughout the study period there have been 640 collisions along I-40 between Town Center Drive and Anderson Road. Four collisions resulted in a fatality, 169 resulted in injuries, and 467 resulted in property damage. The most common types of collisions in this study group is rear-end and fixed object collisions. Three of the fatalities occurred from rear-end collisions and the remaining from a fixed object collision. The overall collision rate for this section is 135.11 collisions per 100 million vehicle miles, compared to the statewide rate of 66.82 for similar facilities.

I-40 and Town Center Drive Interchange

There have been 20 collisions related to the I-40 and Town Center Drive Interchange, mostly angle turning collisions. Roughly 55% of the collisions at the interchange are at the ramp terminals along Town Center Drive. Zero collisions resulted in a fatality, three resulted in injury, and 17 resulted in property damage.

I-40 and Industrial Boulevard Interchange

There have been 14 collisions related to the I-40 and Industrial Boulevard Interchange, mostly right angle and angle turning collisions. Roughly 86% of the collisions at the interchange are at the ramp terminals along Industrial Boulevard. Zero collisions resulted in a fatality, three resulted in injury, and 11 resulted in property damage.

I-40 and Douglas Boulevard Interchange

There have been 103 collisions related to the I-40 and Douglas Boulevard Interchange, and about 70% of these were rear-end collisions. Most of the collisions occur on ramp or collector-distributor road merge locations. Zero collisions resulted in a fatality, 27 resulted in injury, and 76 resulted in property damage.

I-40 and Anderson Road Interchange

There have been 29 collisions related to the I-40 and Anderson Road Interchange, the most common of which are fixed object, rear-end, and angle turning collisions. Roughly 45% of the collisions at the interchange are at the ramp terminals along Anderson Road. Zero collisions resulted in a fatality, ten resulted in injury, and 19 resulted in property damage.

Douglas Boulevard (Between S.E. 29th Street and S.E. 44th Street)

Over the course of the study period along Douglas Boulevard between S.E. 29th Street and S.E. 44th Street, there have been 70 collisions. One collision resulted in a fatality, 26 resulted in injuries, and 43 resulted in property damage. The fatality was a rear-end collision which occurred

near the drive for the Lancer Gate to Tinker Air Force Base. The most common types of collisions are rear-end and angle turning collisions.

The collision analysis report conducted over the course of the study period along Douglas Boulevard between S.E. 29th Street and S.E. 44th Street has some apparent inaccuracies. Although each collision listed is labeled as being along Douglas Blvd. (3300), on the study map there are a number of collisions being shown on Douglas Ave. (1375), which is 9.3 miles farther to the west. After exporting the collision data and going through each listed collision, 11 collisions can reasonably be determined to have been mislabeled based on the names of the intersecting streets and the latitude and longitude of the collisions; however, there is one collision that cannot be determined whether it was mislabeled or not. Additionally, there is no way to determine if these are the only inaccurate collisions or if there are additional errors; perhaps Douglas Boulevard collisions were mislabeled as Douglas Avenue and were not returned in the data search. Therefore, a second analysis was performed in which the 11 collisions that can be reasonably determined to have been mislabeled were removed from the data set in an effort to gain a more accurate analysis.

When the collision data was re-examined and the 11 collisions which can be reasonably be determined to have been mislabeled were removed from the collision data, there have been 59 collisions over the course of the study period along Douglas Boulevard between S.E. 29th Street and S.E. 44th Street. One collision resulted in a fatality, 24 resulted in injuries, and 34 resulted in property damage. The fatality is the same rear-end collision mentioned before at the drive for the Lancer Gate to Tinker Air Force Base. Even though six of the rear-end collisions and two of the angle turning collisions were removed from the data set, the most common types of collisions are still rear-end and angle turning collisions.

1.7 SAFETY ANALYSIS

A safety analysis has been performed using the American Association of State & Highway Transportation Officials Highway Safety Manual (HSM) Predictive Method. Expected crash totals were estimated using the Interactive Highway Safety Design Model (IHSDM) to evaluate safety implications for replacing the cloverleaf interchange with a SPUI and removing two Industrial Boulevard ramps.

The expected crash totals and crash rates from 2020 to 2045, a total of 25 years, for the existing conditions are summarized in Exhibit 19. The IHSDM Predictive Method results are further summarized in Appendix F.

I-40 was evaluated for the entire project length, a total of 1.47 miles. An additional analysis along I-40 was completed to evaluate the effectiveness of increasing the number of basic lanes from two to three with no changes to the ramp configuration. The ramps were evaluated for their entire length.

Existing Conditions	Expected No. Crashes for Evaluation Period	Expected Crash Rate (crashes/mi/yr)	Expected No. Crashes/Year (crashes/million veh-mi)
I-40	571	14.84	0.67
I-40 (with additional lane widening)	514	13.36	0.60
Industrial Blvd. EB Exit	7	1.23	1.05
Industrial Blvd. EB Entrance	4	0.79	1.29
Douglas Blvd. EB Collector-Distributor	27	2.23	0.73
Douglas Blvd. EB Exit (Diamond)	17	2.24	1.46
Douglas Blvd. EB Entrance (Loop)	37	9.87	8.18
Douglas Blvd. EB Exit (Loop)	80	23.23	6.95
Douglas Blvd. EB Entrance (Diamond)	8	1.48	2.99
Douglas Blvd. WB Collector-Distributor	25	2.02	0.69
Douglas Blvd. WB Exit (Diamond)	15	2.27	1.88
Douglas Blvd. WB Entrance (Loop)	44	11.75	7.66
Douglas Blvd. WB Exit (Loop)	21	6.04	12.25
Douglas Blvd. WB Entrance (Diamond)	33	5.99	1.79
Industrial Blvd. WB Exit	4	0.81	1.48
Industrial Blvd. WB Entrance	6	1.13	1.06

EXHIBIT 19: EXISTING CONDITIONS EXPECTED CRASH TOTALS

The expected crash totals and crash rates from 2020 to 2045, a total of 25 years, for the future conditions of removed eastern ramps on Industrial Boulevard and a SPUI at Douglas Boulevard are summarized in Exhibit 20. The IHSDM Predictive Method results are further summarized in Appendix F.

Future Conditions	Expected No. Crashes for Evaluation Period	Expected Crash Rate (crashes/mi/yr)	Expected No. Crashes/Year (crashes/million veh-mi)
I-40	464	12.07	0.56
Industrial Blvd. EB Exit	7	1.23	1.05
Douglas Blvd. EB Exit	52	3.68	0.75
Douglas Blvd. EB Entrance	31	2.27	0.98
Douglas Blvd. WB Exit	35	2.78	1.24
Douglas Blvd. WB Entrance	78	4.70	0.96
Industrial Blvd. WB Entrance	6	1.13	1.06

EXHIBIT 20: FUTURE CONDITIONS EXPECTED CRASH TOTALS

Along I-40 the proposed future conditions reduce the overall crashes by 18.7%. The eastbound ramps combined reduce the overall crashes by 50.0%, and the westbound ramps combined reduce the overall crashes by 19.6%. The crash reduction is shown in Exhibit 21.

	I-40	I-40 (widening)	EB Ramps	WB Ramps	Total
Expected # Crushes, Existing	571	514	180	148	899
Expected # Crushes, Future	464	464	90	119	673
Total Crash Reduction from Existing	107	50	90	29	226
Crash Reduction Factor (CRF)	18.7%	9.7%	50.0%	19.6%	25.1%

EXHIBIT 21: SUMMARY OF CRASH REDUCTION

The safety analysis utilizing the IHSDM Predictive Method displays improvement with the future configuration of removed eastern ramps on Industrial Boulevard and a SPUI at Douglas Boulevard.

2 ACCESS CONNECTIONS AND DESIGN

“The proposed access connects to a public road only and will provide for all traffic movements. Less than “full interchanges” may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.”

Currently Douglas Boulevard is a 4-lane, section line, public road that connects with S.E. 29th Street to the north of I-40 and S.E. 44th Street to the south of I-40. S.E. 44th Street connects to S. Post Road to the east and has no through street to the west. S.E. 29th Street connects with S. Post Road to the east, Midwest Boulevard to the west, and other local streets, see Exhibit 1.

The proposed single point urban interchange at I-40 and Douglas Boulevard will provide a full interchange connecting Douglas Boulevard to I-40, as shown in Exhibit 2. Conceptual Plans are located in Appendix A. The design of the interchange meets or exceeds all design criteria as specified in AASHTO’s *A Policy on Geometric Design of Highways and Streets* and in AASHTO’s *A Policy on Design Standards—Interstate System*. Exhibit 4 displays the design criteria for the I-40 and Douglas Boulevard Interchange project.

The eastern ramps on the Industrial Boulevard Interchange will be removed, reducing the full interchange to half of the traffic movements to and from I-40. The existing ramp configuration between the Industrial Boulevard and Douglas Boulevard Interchanges contains inadequate merge and diverge spacing between the interchanges. Due to the close proximity of the two interchanges, traffic that once utilized the eastern ramps on the Industrial Boulevard Interchange can utilize the Douglas Boulevard Interchange (approximately 0.5 miles east) or the Town Center Drive Interchange (approximately 1-mile west). Advance warning of the I-40 access changes will be reflected in the proposed signage for the interchange as shown on Exhibit 5.

The existing interchange spacing exceeds the design guidelines maximum of one interchange per mile, and the proposed interchange likewise does not adhere to design guidelines for interchange spacing. However, the eastern ramps on the Industrial Boulevard Interchange are being removed to improve the inadequate interchange spacing. The proposed interchange meet design guidelines for lane balance and route continuity. Eastbound I-40 will expand from two basic lanes to three approaching Douglas Boulevard with single lane entrance and exit ramps at Douglas Boulevard and will continue eastward with three basic lanes. Westbound I-40 will be constructed for three basic lanes; however, striping will taper traffic down to two lanes after the single lane exit ramp at Douglas Boulevard and a single lane entrance will merge with the two basic lanes continuing westward, see Exhibit 22. Approximately 1.5 miles of I-40 between Douglas Boulevard and Town Center Drive will be striped as two basic lanes until the completion of the Industrial Boulevard Bridge replacement and I-40 widening to six lanes at the western project extents. At the completion of the western project, the basic number of lanes requirement will be met, see Exhibit 23.

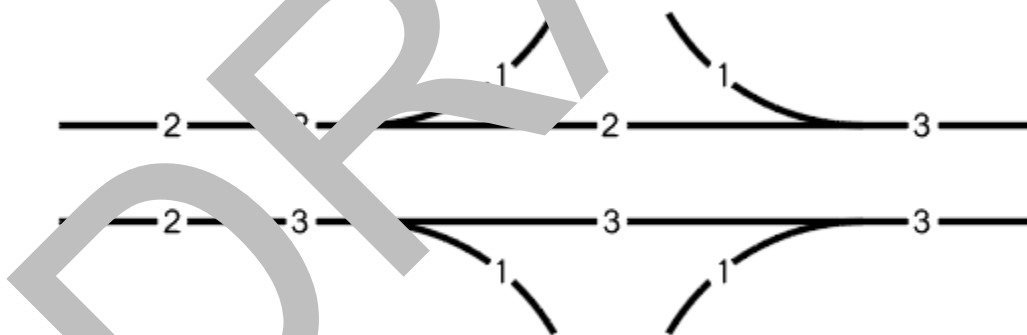


EXHIBIT 22: PROPOSED BASIC NUMBER OF LANES AND LANE BALANCE

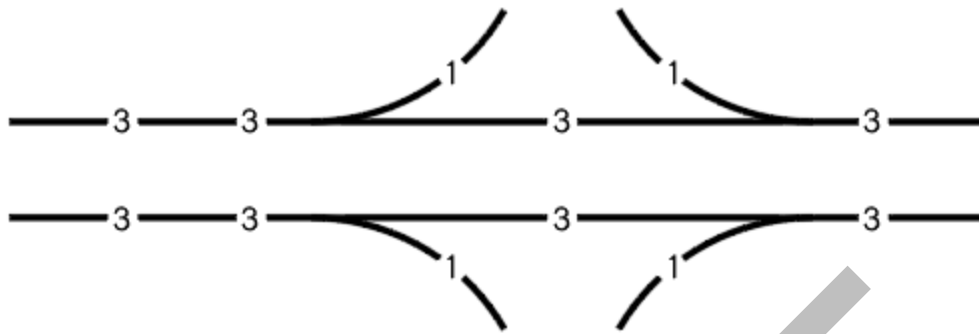


EXHIBIT 23: ULTIMATE BASIC NUMBER OF LANES AND LANE BALANCE

The proposed interchange meets design guidelines for design speed, acceleration and deceleration lane requirements, lane widths, shoulder widths, cross slopes, horizontal curvature, superelevation, cross slope break over requirements, horizontal and vertical stopping sight distance requirements, decision sight distance requirements, intersection sight distance requirements, horizontal clearance, vertical clearance, and clear zone requirements as shown on Exhibit 4.

ODOT Project No. 31011(05) is scheduled to let with the I-40 and Douglas Boulevard project; the project ties to the east end of the I-40 and Douglas Boulevard project and extends east four miles to the I-240 Interchange. Some of the improvements include widening I-40 to a six-lane freeway as well as ramp improvements and new bridges at the Anderson Road Interchange. The new bridge structures will allow for widening of Anderson Road to four lanes in the future and for ramp signalization and dual left-turns lanes on the eastbound exit ramp when improvements are warranted.

Additional I-40 corridor studies are being conducted by ODOT to determine I-40 lane and interchange configurations, from east of I-35, extending east approximately five miles, to west of Douglas Boulevard. This study includes the interchanges at Town Center Drive and Industrial Boulevard.

Design Exceptions are not anticipated at this time; however, during the design phase of the project, if the design criteria are not met, a Design Exception will be prepared. The estimated cost of construction for the proposed interchange is \$42,900,000.

CE Document Checklist

Should be included in the Other Section of all projects

JP No:	28992(04)	Prepared by	D. Abernathy
County:	Oklahoma	Checked by	M. Evans
Date Checked:	3/2/2020		
No	Description		Checked?
1	Project Information		
1.1	Project No (Check against Oracle info)		Correct
1.2	NBI No. - Check against initiation report, oracle, and plans		Correct
1.3	Location No. for County projects only		NA
1.4	Correct Division		Correct
1.5	Project Description (Check against Oracle info and make sure it matches project extent on the plans. If it doesn't match, get the PM to fix the Oracle)		Correct
1.6	Construction Program/STIP/TIP Checked?		Both 8-Year and STIP
2	Existing Conditions		
2.1	If it is a roadway project, is the roadway described first, then any bridges mentioned within the extent		NA
2.2	Is the existing bridge type (box or span), width (or length), conditions for each bridge correct		Yes
2.3	Correct approach roadway width?		Yes
2.4	Any roadway geometric deficiencies?		No
2.5	Traffic data from plans		Yes
3	Purpose & Need		
3.1	Why is the project needed (NEVER what is proposed – REPLACE BRIDGE or WIDEN ROADWAY or ADD SHOUDERS is NOT the Purpose & Need)		Yes
4	Alternatives & Proposed improvement		
4.1	Proposed roadway and bridge width		Yes
4.2	Existing or offset alignment – reason for offset		New interchange configuration

4.3	Replacement, Rehab, Removal or new bridge where there was none	Replacement of Doulgas Blvd. Bridge Removal of Engle Rd. Bridge
4.4	Road open to traffic during construction (If there is a shoofly, it is considered open to traffic. Closed to traffic is only if there is a posted detour on a different route)	Ramps will be detoured to Industrial Blvd. ramps, but there will be no road closures.
4.5	Mention if everthing is w ithin existing R/W	Need less than 1 Ac. R/W
4	Public Involvement	
4.1	Check appropriate public involvement box. Include Road Closure letters in the "Public Involvement" section and Property Owner letters in the "Other Section".	Yes
5	CE Questions & Studies	
5.1	Are the R/W submittal or Final Plans with date stamp included in the Plans & Footprint Section?	90% Not for Construction Plans dated 9/21/18 are attached
5.2	Did the preparer verify that the plans were within study limits?	Yes
5.3	Are the studies arranged in the same order as the CE Questions?	Yes
5.4	Is the NEPA on Hold Memo included?	???
5.5	Is the offset alignment far enough away so that R/W not immediately adjacent to existing R/W is needed?	NA
5.6	Are the federal properties identified (from plans and recon data)	Yes, Tinker Air Force Base (no ROW needed from TAFB)
5.7	CR Report complete & arranged in the chrolnological order from latest to oldest- includes letter to and from SHPO & OAS, CR report, Initial letters to and responses from Tribes, Final letters to and responses from Tribes? Do the CR Notes match the report? Are the notes checked in commitment and included at the end of the CE	Yes.
5.8	Have the 4(f) properties been identified (from Recon, county map, and plans)? If there are 4(f) properties, is the complete Section 4(f) coordination included in the Section 4(f) section?	No 4(f)
5.9	Was Section 6(f) properties verified with Dept. of Tourism for any parks?	No 6(f)
5.10	Is a noise study needed (offset alignments, capacity increase, or major vertical grade change)? If yes, is it included in the Noise Section and any commitments listed in the CE	Yes
5.11	Is the biological studies included and any notes for species included in the commitments & at the end of the CE (Exception is swallows where we include the note itself in the CE under commitments)?	Yes
5.12	Was there a 404 permit type determination done by the 404 permit coordinator for any projects which had > 0.5 AC o wetlands in the initial study? Is the 404 permit box checked (should be yes for all projects involving a bridge crossing a blue line)	No determination done. Standard commitment language.

5.13	Does the project involve navigable waters (check USACE Section 10 waters and then verify with Coastguard) and requires Coastguard coordination? If so, is it listed in the Commitment?	No
5.14	Does the project involve one of the scenic rivers or streams (Check Oklahoma Scenic Rivers website)? If so, include coordination with Scenic Rivers in the "Other Section"	No
5.15	Was there coordination done with NRCS for projects involving new R/W and not in an urban area? Letter to NRCS, AD-1066 Form completed partially (if no response from NRCS) or completely (if NRCS completed their portion), and statement of no response from NRCS if applicable	No
5.16	Is the project location circled on the FEMA map or printout from FEMA site saying no area is available included? If the project is in zone A-E, is the coordination with the Designer to determine the need for map revision included?	Yes. It's located only in Zone A.
5.17	Is the haz waste note mentioned and included at the end of the CE if applicable? If the haz waste specialist required plans to complete studies, were the plans provided and a revised memo obtained?	NA
5.18	Were the plans checked for road closure? Include sheets which say road will not be closed for bridge joint, paint, etc. projects. If there is road closure, were letters sent out and all the comments addressed by Field Division?	Ramps will be detoured to Industrial Blvd. ramps, but there will be no road closures.
5.19	Does the "Other Section" include initiation report, property owner letters or letter from County Commissioner, additional project coordination, local govt. checklist (County), oracle information sheet with federal funding info for County projects, bridge info from GRIP.	Yes, as well as the 02/24/2020 draft AJR Executive Summary and text.

EC 1394W Status Report

NEPA Consultant: Triad Report Date: 2/14/2020

Project: I-40: DOUGLAS BLVD. BRIDGE REPLACEMENT & INTERCHANGE RECONSTRUCTION 6.5 MIS. E. OF I-35 (INCLUDES REMOVAL OF ENGLE RD. BR.) – JP 28992(04) Oklahoma Co
 (Schedule revised 9/26/17 to reflect updated plan delivery dates)

Step ID		Duration in Calendar days	Target Start from Task Order	Target Completion Date from Task Order	Actual Start Date:	Actual Completion Date:	Responsible Party	Comments
1	Task Order Request	15	7/10/2016	7/25/2016		7/17/2016	Director of Eng	Completed
2	Consultant Cost Proposal + Negotiations	60	7/25/2016	9/23/2016	8/28/2016	9/6/2016	Director of Eng	Completed
3	Notice to Proceed Date	0	9/23/2016	9/23/2016	9/6/2016	9/20/2016	PMD	NTP received ~4 weeks later than Target Date.
4.1	Plot Study Footprint/Approval of Study Footprint	10	9/23/2016	10/3/2016	10/18/2016	11/23/2016	ODOT NEPA PM/ Consultant	Footprint prepared based upon outcome of 10/18/16 Design Meeting; submitted to ODOT 11/22/16; approved 11/23/16 (~12 weeks later than target date).
4.2	Property Owner Notification	30	10/3/2016	11/2/2016	11/23/2016	11/28/2016	Consultant	Completed
4.3	Cultural Resources & Tribal Coordination Initiation	15	10/3/2016	10/18/2016	11/23/2016	11/28/2016	Consultant	Completed
4.4	Tribal Coordination 30 Day Waiting Period prior to Start of Specialist Studies	45	10/18/2016	12/2/2016	11/28/2016	12/28/2016	Consultant	Completed
5.1	Cultural Resources Study & SHPO Coordination by ODOT	140	11/2/2016	3/22/2017	12/28/2016	1/17/2017	Consultant	Completed
5.2	T&E & Wetland Studies	30	12/2/2016	1/1/2017	1/10/2017	2/6/2017	Consultant	Completed
5.3	Hazardous Waste Studies	30	12/2/2016	1/1/2017	1/10/2017	2/6/2017	Consultant	Completed
5.4	NRCS coordination	60	10/3/2016	12/2/2016	NA	NA	Consultant	Not needed - no farmland ROW needed
5.5	Noise Studies	30	1/30/2018	3/1/2018	1/10/2017	3/3/2017	Consultant	Completed
5.5.1	ODOT Review of Cultural Resources Studies	0	3/22/2017	3/22/2017	1/17/2017	1/24/2017	ODOT Specialists	Completed
5.5.2	ODOT Review of T&E and Wetland Studies	60	1/1/2017	3/2/2017	2/6/2017	2/6/2017	ODOT Specialists	Completed
5.5.3	ODOT Review of Hazardous Waste Studies	60	1/1/2017	3/2/2017	2/6/2017	4/5/2017	ODOT Specialists	Completed
5.5.4	ODOT Review of Noise Studies	60	3/1/2018	4/30/2018	3/3/2017	6/13/2017	ODOT Specialists	Completed
5.6	USFWS Coordination	45	3/22/2017	5/6/2017	2/6/2017	2/6/2017	ODOT Specialists	Completed
5.7	SHPO Coordination	0	3/22/2017	3/22/2017	1/24/2017	2/22/2017	ODOT Specialists	Completed
6.1	Interchange Alternatives by Designer	0	6/1/2016	6/1/2016			From Project Control status sheet 5/2016	
6.2	Pre Public Meeting	30	10/1/2016	10/31/2016		12/6/2016		Completed
6.3	Public Meeting	30	10/31/2016	11/30/2016	1/17/2017	1/17/2017	From Project Control status sheet 5/2016	Completed
6.4	Selection of Preferred Alternative	30	11/30/2016	12/30/2016	2/17/2017	2/17/2017		Pref Alt Letters mailed 4/19/17
6.5	Receive Preliminary Plan in Hand Plans	0	1/15/2018	1/15/2018			REVISED	
6.6	Review Preliminary Plan in Hand Plans with Footprint	15	1/15/2018	1/30/2018				
6.7	Receive R/W and Utility Meeting Plans	0	1/15/2018	1/15/2018			REVISED	
6.8	Review R/W and Utility Meeting with Footprint	15	1/15/2018	1/30/2018				
7.1	Receive R/W Submittal Plans	0	4/15/2018	4/15/2018			REVISED	
7.2	Review R/W Submittal Footprint	15	4/15/2018	4/30/2018				
7.3.1	DCE Justification	30	1/15/2018	2/14/2018	8/28/2017	1/9/2018	PRELIMINARY PLANS	Completed
7.3	Draft DCE Preparation	15	4/30/2018	5/15/2018	1/9/2018	5/23/2018	From NEPA Task Order	Submitted 1/19; ODOT comments 2/12; revised DCE submitted with draft AJR 5/23/18; (AJR submitted 4/6/18) Triad received Task Order 11 NTP on 5/8/19 Triad is currently working on the additional 29th St. study to be included in the AJR. Triad is currently updating the AJR. The DCE will be resubmitted to ODOT after the AJR has been accepted by ODOT
7.4	Receive R/W Submittal Plans	0	3/15/2018	3/15/2018			NEEDS TO BE SUBMITTED WITH DRAFT DCE TO FHWA	
7.5	ODOT Review	15	5/15/2018	5/30/2018	5/23/2018		ODOT NEPA PM	Received ODOT Comments 9/13; Resubmitted Revised DCE 9/14
7.6	Final CE Preparation	5	5/30/2018	6/4/2018			ODOT NEPA PM	
7.6	FHWA Review of CE/Completion of Document	15	6/4/2018	6/19/2018			FHWA	



**OKLAHOMA DEPARTMENT OF TRANSPORTATION
PROJECT STATUS SYSTEM**

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Project

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[Local Government](#)
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[Survey](#)

Edit PROJECT Cancel

Job Piece: 2899204
Calculated Status: Preliminary Field Review

Production Targets	Planned Finish	Actual Finish	Status	Cond	Consultant Evaluations
Reconnaissance Data	03/06/2013		N/A	●	
Project Initiation	11/03/2015	05/31/2012	Completed	●	
Design Resource	Triad Design Group Inc.				
EC Solicitation	12/09/2013				
EC Contract	07/09/2014				EC No 1394W
Survey	02/02/2016	05/14/2013	Completed	●	SWO 4834(1)
Hydraulics	02/02/2016		N/A	●	
Preliminary Field Review	01/17/2017		Behind	●	
RW & Utility Meeting	02/14/2017		Behind	●	
Plans Submitted to R/W	09/15/2017		Behind	●	
NEPA Document	11/13/2017		Behind	●	
R/W Phase	10/20/2017	Acquisition			
Legal Entry	03/21/2019		On-Time	●	
Prepare Traffic Plans	06/15/2018		On-Time	●	
Final Field Review	09/21/2018		On-Time	●	
Utility Out	07/08/2019		On-Time	●	
404 Permit	04/29/2019		On-Time	●	
Plans Complete	07/16/2019		On-Time	●	
Ready to Let	08/17/2021		On-Time	●	

[Edit Resource and Comments](#)

Utility Information

Latest Utility Out Date
-

Project Information

JP No.	Proj. ID	County	Div.	Maint.	HWY	Work Desc
2899204	J2-8992(004)SS	55 OKLAHOMA	4	4	IS040	06 INTERCHANGE

Project Legislative Districts

Ctrl.	Start	End	Lgth	Cong	Senate	House
068	6.250	6.350	0.100	4	42	095

Project Location

Location
I-40: DOUGLAS BLVD. BRIDGE REPLACEMENT & INTERCHANGE RECONSTRUCTION 6.5 MI S. E. OF I-35 (INCLUDES REMOVAL OF ENGLE RD. BR.)

Project Status

Status	8Year CWP	NHS Sys.	FHWA Oversight	Comm Appr.	Fhwa Auth	Auth FFY	Let Date	FFY	Award Date	RW JP No.	RW Let
Programmed	Yes	Yes		10/2011	-		NoDate	2025	NoDate	-	-

STIP & NEPA Information

STIP FY	STIP Page	Pub Date	ODOT Appr.	TIP FY	TIP Page	MPO Appr.	NEPA Type	NEPA Appr	NEPA Re-Eval
									//

Project Budget & Plan Resource

Advanced	Federal	State	Other	Total	Design Consultant	NEPA Consultant
\$0	\$29,931,055	\$7,495,264	\$0	\$37,426,319	Triad Design Group Inc.	Triad Design Group Inc.

ODOT/FHWA Resources Assigned

PMD	Field	FHWA	NEPA	Survey	Materials	Roadway	Bridge	Traffic	RW	Rail
Nguyen	Taylor	Bahavar	Guerrero	Reser	-	Sharkness	Thomas	-	-	-

Comments
no data found

Bridge Information

NBI#	Status	Co	Ctl	Milept	Sd
15560	Deleted Bridge	55	068	06080	
15573	State Bridge	55	068	06340	

1-2



OKLAHOMA DEPARTMENT OF TRANSPORTATION PROJECT STATUS SYSTEM

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Project

Home > List Projects > Edit Project > Edit Environmental Data > **Edit NEPA Document**

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NEPA Document Preparation

NEPA On Hold Memo Sent Date	<input type="text"/>	
R/W Submittal Plans Recd	<input type="text"/>	
Draft Document Target Date	04/30/2018	
Draft Document Actual Date	<input type="text"/>	

CE Review

Draft CE Review by ODOT	<input type="text"/>	
Comments To Consultant	<input type="text"/>	
Revised CE from Consultant	<input type="text"/>	
CE to FHWA (if applicable)	<input type="text"/>	
Date of FHWA / ODOT Approval of CE	<input type="text"/>	
CE Distribution	<input type="text"/>	

EA Review

Draft EA Review by ODOT	<input type="text"/>	
Draft EA Review by FHWA	<input type="text"/>	
Comments to Consultant	<input type="text"/>	
Revised EA from Consultant	<input type="text"/>	
Draft EA to FHWA	<input type="text"/>	
Draft EA Approval by FHWA	<input type="text"/>	
Final EA from Consultant	<input type="text"/>	
Final EA Reviewed	<input type="text"/>	
Final EA to FHWA	<input type="text"/>	
FONSI from FHWA	<input type="text"/>	
FONSI Distribution	<input type="text"/>	

NEPA Document Navigation

- Recon
- Section 4F
- Public Involvement
- Re-Evaluation

Edit Original NEPA Document

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Job Piece 2899204

Initial

Initiation Report from PMD	<input type="text"/>	
Footprint Review Prior to Start of Studies	<input type="text"/>	
Consultant Notice To Proceed	<input type="text"/>	
Property Owner Notification	11/28/2016	
BLM Notification	11/28/2016	
BIA Notification	11/28/2016	
Consultant CR/Tribal Initiation	12/28/2016	

Studies

Farmland NRCS Requested	<input type="text"/>	
Farmland NRCS Complete	<input type="text"/>	
CR Studies Requested	11/02/2016	
CR Studies Due	03/22/2017	
CR Studies Recd	02/22/2017	
Biological Studies Requested	12/02/2016	
Biological Studies Due	05/06/2017	
Biological Studies Recd	02/06/2017	
Meeting with 404 Permit Coordinator for Delineation	<input type="text"/>	
Haz Waste Studies Requested	12/02/2016	
Haz Waste Studies Due	03/02/2017	
Haz Waste Studies Recd	04/05/2017	
Noise Studies Requested	<input type="text"/>	
Noise Studies Due	<input type="text"/>	
Noise Studies Recd	06/12/2017	
Relo Studies Requested	<input type="text"/>	
Relo Studies Due	<input type="text"/>	
Relo Studies Recd	<input type="text"/>	

OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 67.8

Health Index :

NBI No.: **15559**

Structure No.: 5568 0585 X

Local ID:-1

FO

59.6

IDENTIFICATION
 Description:
 37'-59'-59'-43' CONT. CONC. SLAB SPANS WITH 2-1.5' SAFETY CURBS
 1. State: Oklahoma 2. SHD District: Division 4
 3. County Code: OKLAHOMA 4. Place Code: OKLA. CITY
 Admin. Area: Unknown
 5. Inventory Route (Route On Structure) : 1 - 5 - 1 - 00000 - 0
 6. Feature Intersected: I-40 UNDER
 7. Facility Carried: INDUSTRIAL BLVD. INDUSTRIAL BLVD.
 9. Location: 6 MI E OF JCT I35 11. Mile Post: 5.849 mi
 13. LRS Inv. Route./ Subroute.: -1 -1
 16. Latitude: 35 26 02.94 17. Longitude: 097 22 44.05
 98. Border Br. Code: Inknown (P) % Resp. : 0 99. Border Br. #: Unknown

STRUCTURE TYPE AND MATERIALS
 43. Main Span Material and Design Type
 Concrete Continuous Slab
 44. Approach Span Material and Design Type
 Not Applicable (P) Not Applicable (P)
 45. No. of Spans Main Unit: 4 46. No. of Approach Spans: 0
 107. Deck Type: 1 Concrete-Cast-in-Place
 108A. Wearing Surface: 0 None
 108B. Membrane: 0 None
 108C. Deck Protection: None

AGE AND SERVICE
 27. Year Built: 1962 106. Year Reconstructed: -4
 28A. Lanes on: 4 28B. Lanes Under: 4 19. Detour Length: 2.0 mi
 29. ADT: 1000 30. Year of ADT: 2011 109. Truck ADT %: 5
 42A. Type of Service on: 1 Highway
 42B. Type of Service under: 1 Highway

GEOMETRIC DATA
 10. Inv. Rte. Min. Vert. Clr.: 328.1 ft
 32. Approach Roadway Width (W/ Shoulders): 48.0 ft
 Deck Area: 10,527.1 sq. ft 33. Median: 0 No median
 34. Skew: 8 35. Structure Flared: 0 No flare
 47. Inv. Rte. Total Horiz. Clr.: 48.0 ft
 48. Length Maximum Span: 59.0 ft 49. Structure Length: 199.0 ft
 50A. Curb/Sdwk Wth L: 1.5 ft 50B. Curb/Sidewalk Width R: 1.5 ft
 51. Width Curb to Curb: 48.0 ft 52. Width Out to Out: 52.9 ft
 53. Minimum Vertical Clearance Over Bridge: 328.1 ft
 54A/54B. Min. Vert. Underclearance : H Hwy beneath struct 16.5 ft
 N/E S/W
 Meas. E1802 E1804 -1 W1607 W1801 -1
 Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U
 55A/55B. Minimum Lateral Underclearance R: H Hwy beneath struct 9.4 ft
 56. Minimum Lateral Underclearance L: 21.5 ft

INSPECTION

Type	Insp Req.	Insp Done	Freq:	Insp. Date:	Next Insp.:
NBI:		Y	24	10/22/2012	10/22/2014
Element:		Y	24	10/22/2012	10/22/2014
FC Freq.:	N	N	NA	NA	NA
UW Freq.:	N	N	NA	NA	NA
OS Freq.:	N	N	NA	NA	NA

CLASSIFICATION

12. Base Hwy Network : Not on Base Network 20. Toll Facility: 3 On free road
 21. Custodian: 01State Highway Agency 22. Owner: 01 State Highway Agency
 26. Functional Class: 16 Urban Minor Arter 37. Historical Sig.: 5 Not eligible for NRHP
 100. Defense Highway: 0 Not a STRAHNET h 101. Parallel Structure: No || bridge exists
 102. Dir. of Traffic: 2 2-way traffic 103. Temp. Structure: Not Applicable (P)
 104. Highway System: 0 Not on NHS 105. Fed. Land Hwy 0 N/A (NBI)
 110. National Truck Network: 0 Not part of na 112. NBIS Length: Long Enough

CONDITION

58. Deck: 5 Fair 59. Super.: 7 Good 60. Sub.: 5 Fair
 62. Culvert: N N/A (NBI) 61. Channel/Channel Protection: N N/A (NBI)
 Flowline Notes:

LOAD RATING AND POSTING

31. Design Load: 5 MS 18 (HS 20) 41. Posting status: A Open, no restriction
 63. Op. Rating Method: 2 AS Allow. Stress-7 Alt. Op. Rating Meth.: 2 AS Allow. Stress-7
 64. Operating Rating (H / HS / 3-3): 48.6 49.0 -1.1
 66. Inventory Rating (H / HS / 3-3): 35.7 36.0 -1.1
 65. Inv. Rating Method: 2 AS Allow. Stress Alt. Inv. Rating Meth.: 2 AS Allow. Stress-7
 70. Posting: 5 At/Above Legal Loads Date Rated : 1/1/1901

PROPOSED IMPROVEMENTS

94. Bridge Cost: \$1,585,569 75. Type of Work: 31 Repl-Load Capacit
 95. Roadway Cost: \$2,616,189 76. Lgth. of Improvement: 238.5 ft
 96. Total Cost: \$4,439,593 114. Future ADT: 1600
 97. Year of Cost Est.: 2007 115. Year of Future ADT: 2031

NAVIGATION DATA

38. Navigation Control: NA-no waterway
 39. Vertical Clearance: 0.0 ft 40. Horizontal Clearance: 0.0 ft
 111. Pier Protection: Not Applicable (P) 116. Lift Bridge Vert. Clear.: 0.0 ft

APPRAISAL

36A. Bridge Rail: 0 Substandard 36C. Approach Rail: 0 Substandard
 36B. Transition: 0 Substandard 36D. Approach Rail Ends: 0 Substandard
 67. Str. Evaluation: 5 Above Min Tolerable 68. Deck Geometry: 2 Intolerable - Replace
 69. Underclearance, Vertical and Horizontal: 2 Intolerable - Replace
 71. Waterway Adequacy: N Not applicable
 72. Approach Alignment: 6 Equal Min Criteria
 113. Scour Critical: N Not Over Waterway

200c. Temperature: 72
 200d. Weather: CLOUDY
 201. Structural Steel ASTM Desig.: -1 -1
 202. Waterproof Membrane : -1
 Date Installed: 1/1/1901
 203. Type Exp. Dev. : Pourable
 -
 204. Type of Handrail: Concrete Post and Steel Rails
 205. Material and Quantity : -1
 208. Type of Abutment : Skeleton
 Type of Foundation : Natural Foundation Matl.
 209. Type of Pier / Found.: 5 No
 No Piling or Drilled Shaft
 210. Foundation Elev. -3 -3
 -1 -1 -1
 211. Wear. Surf. Prot. System : None
 Date Installed : 1/1/1901
 213. Utilities Attached : -1
 -1 -1 -1
 -1 -1 -1

STATE OF OKLAHOMA BRIDGE ITEMS

214a. Posted Weight Limit: NR
 b. Posted Speed Limit : NR
 c. Narrow/One Lane Bridge sign : N
 d. Vertical Clearance Sign: YES
 Advanced Warning Sign : NO
 Existing/Recommended Posting : 1711 1604
 Min./ Max Vert. Clearance : 1607 1806
 e. Navigation Lights : -
 Working/Not Working : -
 215. Overpass : A - Interstate
 221. Substructure Cond. (U/W) : -
 222. Fill over RCB: -1
 223. Appr. Slab/Rdwy Cond.: Poor
 224. Critical Feature Type: -1
 225. Paint Type : Not Applicable
 Overcoat : 0
 226. Date Painted: -1
 227. Paint Coloring: -1
 233. Deck Forming: Conventional Forming
 236. Deck Cleaning : -1

238. School Bus Rte: Current and Desired Route
 240. Appr. Roadway Type: Concrete
 243. Girder Spacing : -1
 244. Span Lengths :
 -1 -1 -1
 -1 -1 -1
 -1 -1
 245. Girder Depth : -1
 246. Type of Overlay : -
 246. Overlay Thickness : 0
 246. Overlay Date : 1/1/1901
 246. Overlay Depth Changed > 1"? No
 247. Protective Systems : 1: -
 2: - 3: -
 4: - 5: -
 248. No. of Field Splices w/ Corrosion : -1
 249. Scour Crit. POA exists?: -
 250. Culvert Headwall Dist.: -1
 254. Thru Truss Type :
 256. Chan. Profile Up/Down Stream?: -

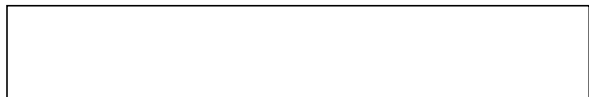
OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 67.8
FO

Health Index :
59.6

NBI No.: 15559 Structure No.: 5568 0585 X Local ID:-1

Inspection Date: 10/22/2012 Reported By: GHINES
 Invoice No.: -1 Inspected With: Gary Richardson
 Agency : ODOT, Div. 4



Structure / Inspection Notes

G Hines inspection comments - 10/22/2012

PX - erosion along the SW & NW slopedwalls is causing cavities to develop under them * PX - The approach railings should be updated to meet current standards * PX - Fair to poor concrete approach roadway (top) - the North approach is 2-3 inches low with a sharp transition of asphalt & a large spall at the deck edge is settled *

Elm.	Env.	Description	Un.	Qty.	Qty.St. 1	% 1	Qty.St. 2	% 2	Qty.St. 3	% 3	Qty.St. 4	% 4	Qty.St. 5	% 5
38	4	Reinforced Concrete Slab	(SF)	9,504	0	0 %	9,504	100 %	0	0 %	0	0 %	0	0 %
205	4	Reinforced Conc Column or Pile Extension	(EA)	15	4	27 %	1	7 %	10	67 %	0	0 %	0	0 %
215	4	Reinforced Conc Abutment	(LF)	107	31	29 %	59	55 %	17	16 %	0	0 %	0	0 %
234	4	Reinforced Conc Cap	(LF)	157	154	98 %	3	2 %	0	0 %	0	0 %	0	0 %
311	4	Moveable Bearing (roller, sliding, etc.)	(EA)	80	40	50 %	40	50 %	0	0 %	0	0 %	0	0 %
321	4	Reinforced Conc Approach Slab w/ or w/o AC O	(EA)	2	0	0 %	1	50 %	0	0 %	1	50 %	0	0 %
330	4	Metal Bridge Railing	(LF)	347	0	0 %	347	100 %	0	0 %	0	0 %	0	0 %
331	4	Reinforced Conc Bridge Railing	(LF)	50	48	96 %	0	0 %	2	4 %	0	0 %	0	0 %
358	4	Concrete Cracking	(EA)	1	0	0 %	0	0 %	0	0 %	1	100 %	0	0 %
659	4	Soffit of Concrete Decks and Slabs	(SF)	9,504	9,504	100 %	0	0 %	0	0 %	0	0 %	0	0 %
909	4	Pourable Fixed Joint Seal	(LF)	107	0	0 %	107	100 %	0	0 %	0	0 %	0	0 %
968	4	Erosion	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %
970	4	Wing	(EA)	3	3	100 %	0	0 %	0	0 %	0	0 %	0	0 %

Additional Elements

Elem.	Element Notes (Include Size and Location of Deterioration)
38	PX - LOTS of scaling & spalling along the East curb. One moderate spall along the North edge near the centerline. Approximately 15% of the total area is affected. Numerous popouts noted. Needs an overlay in the near future. Also see SF #358.
205	PX - The 3rd, 4th, & 5th columns in bent #1 are spalled with rebar exposed. The 5th column in bent #3 is cracked & deeply spalled (2008 photos). On bent #2 there is a moderate spall on the 5th column & a small spall present on the 4th column. Minor cracking noted on the 1st & 2nd columns in bent #1. Minor spalls on #1 thru #4 columns all in bent #3. Needs repair in the near future.
215	FX - Some light vertical cracking noted on each abutment. Moderate spalling above the South abutment seat behind the 5th & 6th beams (2010 photo). Moderate to heavy horizontal cracking on the South with delaminations below 5-6, 7-8, 10-12, & the 15th pedestals. Heavy cracking on the NE behind the 20th roller into & above the seat. Still stable at this time.
234	Tiny delamination noted on the SW end of the 3rd cap. One light crack on SW corner of the 2nd cap. Minor defects noted at the East end of the 1st cap.
311	FX - All of the rollers on the North abutment are rotated back @ 20 degrees & need re-positioned (2006 photo). Light to moderate exfoliation noted on most on the North as well. Surface rust is present on the lower areas of most of the South abutment bearings with rust under the mortar plates stressing the anchors.
321	PX - The South slab is broken & buckled from curb to curb about 3' from the deck; there is a moderate crack in the North slab. Some leveling has been attempted but needs more. The North slab also has a large spall that needs repair soon.
330	Light freckle rust is developing in all areas.
331	One post each on the East & West has a minor spall. Minor weathering overall.
358	PX - Lots of light to moderate cracks of moderate to heavy density are present in each span. Every square foot in the traffic lanes has some degree of cracking present.
659	Less than 2% of the total area has minor discoloration - mainly the fascia areas. Some light cracks noted without staining or efflorescence.
909	FX - Moderate deterioration of the sealant over the abutments with some seepage evident below.
968	PX - erosion along the SW & NW slopedwalls is causing cavities to develop under them
970	The SE, SW, & NE wing are cracked at the junction point up to 1/4" - no loose of fill yet.

Roadway Name : I-40 UNDER		NBI Information Applicable To The Route Under The Structure	
5. Inventory Route (Route Under Structure :	2 - 1 - 1 - 00040 - 0	102. Traffic Dir.:	2 2-way traffic
10. Min. Vert. Clr.(ft.):	16.5	104. Highway System :	1 On the NHS
12. Base Hwy Network :	On Base Network	105. Fed Land Hwy :	0 N/A (NBI)
13. LRS Inv. Rt./ Subroute :	5568HP0000 / 06	109. Truck ADT% :	12
19. Detour Len.(Mi.):	0.0	110. Natl. Truck Network :	1 Part of natl network
20. Toll Facility :	3 On free road	114. Future ADT :	81440
26. Function Class.:	11 Urban Interstate	28b. Lanes Und.:	4
		29. ADT :	50900
		32. Appr. Roadway Width (ft.) :	76.0
		47. Total Horiz. Clr.(ft.):	52.0
		51. Roadway Width (ft.) :	48.0
		100. Defense Highway :	1 On Interstate STRAHNET

OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 79.6

Health Index :

NBI No.: **15560**

Structure No.: 5568 0608 X

Local ID:-1

FO

78.7

IDENTIFICATION	INSPECTION																																				
<p>Description: 41'-62'-62'-41' CONT. CONC. SLAB SPANS WITH 2-3' SIDEWALKS</p> <p>1. State: Oklahoma 2. SHD District: Division 4 3. County Code: OKLAHOMA 4. Place Code: OKLA. CITY Admin. Area: Unknown</p> <p>5. Inventory Route (Route On Structure) : 1 - 5 - 1 - 00000 - 0 6. Feature Intersected: I-40 UNDER</p> <p>7. Facility Carried: ENGLE RD. ENGLE ROAD 9. Location: 6.2 MI E OF JCT I35 11. Mile Post: 6.079 mi 13. LRS Inv. Route./ Subroute.: -1 -1 16. Latitude: 35 25 59.50 17. Longitude: 097 22 30.49 98. Border Br. Code: Not Applicab % Resp. : 0 99. Border Br. #: Unknown</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type</th> <th style="text-align: left;">Insp Req.</th> <th style="text-align: left;">Insp Done</th> <th style="text-align: left;">Freq:</th> <th style="text-align: left;">Insp. Date:</th> <th style="text-align: left;">Next Insp.:</th> </tr> </thead> <tbody> <tr> <td>NBI:</td> <td></td> <td>Y</td> <td>24</td> <td>10/19/2012</td> <td>10/19/2014</td> </tr> <tr> <td>Element:</td> <td></td> <td>Y</td> <td>24</td> <td>10/19/2012</td> <td>10/19/2014</td> </tr> <tr> <td>FC Freq.:</td> <td>N</td> <td>N</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>UW Freq.:</td> <td>N</td> <td>N</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>OS Freq.:</td> <td>N</td> <td>N</td> <td>NA</td> <td>NA</td> <td>NA</td> </tr> </tbody> </table>	Type	Insp Req.	Insp Done	Freq:	Insp. Date:	Next Insp.:	NBI:		Y	24	10/19/2012	10/19/2014	Element:		Y	24	10/19/2012	10/19/2014	FC Freq.:	N	N	NA	NA	NA	UW Freq.:	N	N	NA	NA	NA	OS Freq.:	N	N	NA	NA	NA
Type	Insp Req.	Insp Done	Freq:	Insp. Date:	Next Insp.:																																
NBI:		Y	24	10/19/2012	10/19/2014																																
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UW Freq.:	N	N	NA	NA	NA																																
OS Freq.:	N	N	NA	NA	NA																																
<p style="text-align: center;"><u>STRUCTURE TYPE AND MATERIALS</u></p> <p>43. Main Span Material and Design Type Concrete Continuous Slab</p> <p>44. Approach Span Material and Design Type Not Applicable (P) Not Applicable (P)</p> <p>45. No. of Spans Main Unit: 4 46. No. of Approach Spans: 0</p> <p>107. Deck Type: 1 Concrete-Cast-in-Place 108A. Wearing Surface: 0 None 108B. Membrane: 0 None 108C. Deck Protection: None</p>	<p style="text-align: center;"><u>CLASSIFICATION</u></p> <p>12. Base Hwy Network : Not on Base Network 20. Toll Facility: 3 On free road 21. Custodian: 01State Highway Agency 22. Owner: 01 State Highway Agency 26. Functional Class: 16 Urban Minor Arter 37. Historical Sig.: 5 Not eligible for NRHP 100. Defense Highway: 0 Not a STRAHNET h 101. Parallel Structure: No bridge exists 102. Dir. of Traffic: 2 2-way traffic 103. Temp. Structure: Not Applicable (P) 104. Highway System: 0 Not on NHS 105. Fed. Land Hwy 0 N/A (NBI) 110. National Truck Network: 0 Not part of na 112. NBIS Length: Long Enough</p> <p style="text-align: center;"><u>CONDITION</u></p> <p>58. Deck: 5 Fair 59. Super.: 6 Satisfactory 60. Sub.: 6 Satisfactory 62. Culvert: N N/A (NBI) 61. Channel/Channel Protection: N N/A (NBI) Flowline Notes:</p>																																				
<p style="text-align: center;"><u>AGE AND SERVICE</u></p> <p>27. Year Built: 1962 106. Year Reconstructed: -4 28A. Lanes on: 2 28B. Lanes Under: 4 19. Detour Length: 2.0 mi 29. ADT: 1000 30. Year of ADT: 2011 109. Truck ADT %: 5 42A. Type of Service on: 5 Highway-pedestrian 42B. Type of Service under: 1 Highway</p>	<p style="text-align: center;"><u>LOAD RATING AND POSTING</u></p> <p>31. Design Load: 5 MS 18 (HS 20) 41. Posting status: A Open, no restriction 63. Op. Rating Method: 2 AS Allow. Stress-7 Alt. Op. Rating Meth.: 2 AS Allow. Stress-7 64. Operating Rating (H / HS / 3-3): 48.6 49.0 -1.1 66. Inventory Rating (H / HS / 3-3): 35.7 36.0 -1.1 65. Inv. Rating Method: 2 AS Allow. Stress Alt. Inv. Rating Meth.: 2 AS Allow. Stress-7 70. Posting: 5 At/Above Legal Loads Date Rated : 1/1/1901</p>																																				
<p style="text-align: center;"><u>GEOMETRIC DATA</u></p> <p>10. Inv. Rte. Min. Vert. Clr.: 328.1 ft 32. Approach Roadway Width (W/ Shoulders): 26.0 ft Deck Area: 6,985.8 sq. ft 33. Median: 0 No median 34. Skew: 24 35. Structure Flared: 0 No flare 47. Inv. Rte. Total Horiz. Clr.: 26.0 ft 48. Length Maximum Span: 62.0 ft 49. Structure Length: 206.0 ft 50A. Curb/Sdwk Wth L: 3.0 ft 50B. Curb/Sidewalk Width R: 3.0 ft 51. Width Curb to Curb: 26.0 ft 52. Width Out to Out: 33.9 ft 53. Minimum Vertical Clearance Over Bridge: 328.1 ft 54A/54B. Min. Vert. Underclearance : H Hwy beneath struct 15.6 ft</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">N/E</th> <th style="text-align: center;">S/W</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Meas. E1608 E1700 EP1509 W1608 W1610 WP1508</td> <td></td> </tr> <tr> <td style="text-align: center;">Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U</td> <td></td> </tr> </tbody> </table> <p>55A/55B. Minimum Lateral Underclearance R: H Hwy beneath struct 2.0 ft 56. Minimum Lateral Underclearance L: 18.5 ft</p>	N/E	S/W	Meas. E1608 E1700 EP1509 W1608 W1610 WP1508		Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U		<p style="text-align: center;"><u>PROPOSED IMPROVEMENTS</u></p> <p>94. Bridge Cost: \$1,011,018 75. Type of Work: 31 Repl-Load Capacit 95. Roadway Cost: \$1,668,180 76. Lgth. of Improvement: 258.6 ft 96. Total Cost: \$2,830,851 114. Future ADT: 1600 97. Year of Cost Est.: 2007 115. Year of Future ADT: 2031</p> <p style="text-align: center;"><u>NAVIGATION DATA</u></p> <p>38. Navigation Control: NA-no waterway 39. Vertical Clearance: 0.0 ft 40. Horizontal Clearance: 0.0 ft 111. Pier Protection: Not Applicable (P) 116. Lift Bridge Vert. Clear.: 0.0 ft</p> <p style="text-align: center;"><u>APPRAISAL</u></p> <p>36A. Bridge Rail: 0 Substandard 36C. Approach Rail: 0 Substandard 36B. Transition: 0 Substandard 36D. Approach Rail Ends: 0 Substandard 67. Str. Evaluation: 6 Equal Min Criteria 68. Deck Geometry: 5 Above Tolerable 69. Underclearance, Vertical and Horizontal: 2 Intolerable - Replace 71. Waterway Adequacy: N Not applicable 72. Approach Alignment: 8 Equal Desirable Crit 113. Scour Critical: N Not Over Waterway</p>																														
N/E	S/W																																				
Meas. E1608 E1700 EP1509 W1608 W1610 WP1508																																					
Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U																																					
<p>200c. Temperature: 73 200d. Weather: CLEAR 201. Structural Steel ASTM Desig.: -1 -1 202. Waterproof Membrane : -1 Date Installed : 1/1/1901 203. Type Exp. Dev. : Pourable - 204. Type of Handrail: Concrete Post and Steel Rails 205. Material and Quantity : -1 208. Type of Abutment : Skeleton Type of Foundation : Natural Foundation Matl. 209. Type of Pier / Found.: 3 Piers No No Piling or Drilled Shaft 210. Foundation Elev. -3 -3 -1 -1 -1 211. Wear. Surf. Prot. System : None Date Installed : 1/1/1901 213. Utilities Attached : -1 -1 -1 -1 -1 -1 -1</p>	<p style="text-align: center;"><u>STATE OF OKLAHOMA BRIDGE ITEMS</u></p> <p>214a. Posted Weight Limit: NR b. Posted Speed Limit : NR c. Narrow/One Lane Bridge sign : N d. Vertical Clearance Sign: YES Advanced Warning Sign : NO Existing/Recommended Posting : 1506 1505 Min./ Max Vert. Clearance : 1508 1700 e. Navigation Lights : - Working/Not Working : - 215. Overpass : A - Interstate 221. Substructure Cond. (U/W) : - 222. Fill over RCB: -1 223. Appr. Slab/Rdwy Cond.: Good 224. Critical Feature Type: -1 225. Paint Type : Not Applicable Overcoat : 0 226. Date Painted: -1 227. Paint Coloring: -1 233. Deck Forming: Conventional Forming 236. Deck Cleaning : -1</p> <p>238. School Bus Rte: Current and Desired Route 240. Appr. Roadway Type: Asphalt/Bituminous 243. Girder Spacing : -1 244. Span Lengths : -1 -1 -1 -1 -1 -1 245. Girder Depth : -1 246. Type of Overlay : - 246. Overlay Thickness : 0 246. Overlay Date : 1/1/1901 246. Overlay Depth Changed > 1"? No 247. Protective Systems : 1: - 2: - 3: - 4: - 5: - 248. No. of Field Splices w/ Corrosion : -1 249. Scour Crit. POA exists?: - 250. Culvert Headwall Dist.: -1 254. Thru Truss Type : 256. Chan. Profile Up/Down Stream?: -</p>																																				

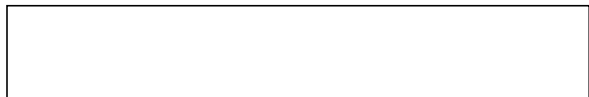
OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 79.6
FO

Health Index :
78.7

NBI No.: **15560** Structure No.: 5568 0608 X Local ID:-1

Inspection Date: 10/19/2012 Reported By: GHINES
Invoice No.: -1 Inspected With: Gary Richardson
Agency : ODOT, Div. 4



Structure / Inspection Notes

- * THE W.B. CLEARANCE SIGN IS OK OVER THE THRU ROUTE BUT THE CLEARANCE ABOVE THE ON-RAMP LANE IS 1' LESS! (ANNEX NOTIFIED).
- * (THE E.B. SIGNS HAVE BEEN CHANGED).
- * MAXIMUM HORIZONTAL UNDERCLEARANCE: EB = 43', WB = 46'.

G Hines inspection comments - 10/19/2012

The roadway above is gated off due to security changes at Tinker AFB - the ADT is basically zero (the South gate is open at this time but the roadway on the South 100' away is a dead end) *
PX - There is heavy erosion on the SE & SW slopes near the slopewalls * Safety below = 1111 * Satisfactory side drains

Elm.	Env.	Description	Un.	Qty.	Qty.St. 1	% 1	Qty.St. 2	% 2	Qty.St. 3	% 3	Qty.St. 4	% 4	Qty.St. 5	% 5
38	4	Reinforced Concrete Slab	(SF)	5,500	0	0 %	5,500	100 %	0	0 %	0	0 %	0	0 %
205	4	Reinforced Conc Column or Pile Extension	(EA)	9	5	56 %	1	11 %	3	33 %	0	0 %	0	0 %
215	4	Reinforced Conc Abutment	(LF)	74	62	84 %	12	16 %	0	0 %	0	0 %	0	0 %
234	4	Reinforced Conc Cap	(LF)	105	99	94 %	5	5 %	1	1 %	0	0 %	0	0 %
301	4	Pourable Joint Seal	(EA)	22	0	0 %	0	0 %	0	0 %	22	100 %	0	0 %
310	4	Elastomeric Bearing	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %
311	4	Moveable Bearing (roller, sliding, etc.)	(EA)	32	24	75 %	8	25 %	0	0 %	0	0 %	0	0 %
321	4	Reinforced Conc Approach Slab w/ or w/o AC O	(EA)	2	0	0 %	2	100 %	0	0 %	0	0 %	0	0 %
330	4	Metal Bridge Railing	(LF)	373	0	0 %	367	98 %	6	2 %	0	0 %	0	0 %
331	4	Reinforced Conc Bridge Railing	(LF)	50	46	92 %	2	4 %	1	2 %	1	2 %	0	0 %
358	4	Concrete Cracking	(EA)	1	0	0 %	0	0 %	0	0 %	1	100 %	0	0 %
659	4	Soffit of Concrete Decks and Slabs	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %

Additional
Elements

Elem.	Element Notes (Include Size and Location of Deterioration)
38	Lots of small popouts overall - some scaling along the East curb. Also see SF #358.
205	FX - One moderate spall noted on the 3rd column in bent #3 & #2 in bent #1(both near the ground). Minor delamination present on #3 in bent #1 with cracking. Still solid overall.
215	Several light vertical cracks with efflorescence are present on the North abutment with a few on the South. Some discoloration noted.
234	The NE end of the 3rd cap has an small impending spall. Light cracking present on the 2nd cap near the 2nd column. Small crack noted on each end of the 1st cap with a small delamination at the NE area. Two cracks visible on the North face of bent #2.
301	PX - The sealant in each joint is deteriorated & failing and allowing water to pass through to the abutments. There is up to a 3 inch gap at some areas.
310	There is a single full-width pad on bent #2.
311	Some moderate surface rust is present on all rollers on the South abutment. Some lateral movement noted - ears on a few ears are partially sheared off.
321	North slab has moderate cracking & the South slab has minor cracking.
330	FX - One section in span #4 is weakened due to spalling on the posts. Minor to moderate surface rust is present otherwise on the steel portion of the railing.
331	The concrete portion (posts) of the railing has superficial weathering overall. One post on the west side of span #3 is chipped at the top, another in span #4 is spalled at the top weakening the steel portion. There are 2 other posts with light cracking at the curb junction.
358	PX - The deck has pattern cracking in all areas approximately every 4 to 8 inches (2010 photo). The cracks are light to heavy in size. The deck needs a high density overlay or epoxy flood coat soon.
659	Some minor deterioration noted mainly on the fascia areas. Less than 2% of the total area is affected.

Roadway Name : I-40 UNDER		NBI Information Applicable To The Route Under The Structure	
5. Inventory Route (Route Under Structure : 2 - 1 - 1 - 00040 - 0		102. Traffic Dir.:	2 2-way traffic
10. Min. Vert. Clr.(ft.): 15.6	28b. Lanes Und.: 4	104. Highway System :	1 On the NHS
12. Base Hwy Network : On Base Network	29. ADT : 50900	105. Fed Land Hwy :	0 N/A (NBI)
13. LRS Inv. Rt./ Subroute : 5568HP0000 / 06	32. Appr. Roadway Width (ft.) : 74.0	109. Truck ADT% :	12
19. Detour Len.(Mi.): 0.0	47. Total Horiz. Clr.(ft.): 46.0	110. Natl. Truck Network :	1 Part of natl network
20. Toll Facility : 3 On free road	51. Roadway Width (ft.) : 74.0	114. Future ADT :	81440
26. Function Class.: 11 Urban Interstate	100. Defense Highway : 1 On Interstate STRAHNET		

OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 77
FO

Health Index :
67.6

NBI No.: 15573 Structure No.: 5568 0634 X

Local ID:-1

IDENTIFICATION
Description:
41'-55'-60'-60'-50'-41 CONT. CONC. SLAB SPANS WITH 2-3' SIDEWALKS
1. State: Oklahoma 2. SHD District: Division 4
3. County Code: OKLAHOMA 4. Place Code: OKLA. CITY
Admin. Area: Unknown
5. Inventory Route (Route On Structure) : 1 - 5 - 1 - 09541 - 0
6. Feature Intersected: I-40 UNDER
7. Facility Carried: FAU 9541 DOUGLAS I FAU 9541 DOUGLAS B
9. Location: 6.5 MI E OF JCT I35 11. Mile Post: 6.339 mi
13. LRS Inv. Route./ Subroute.: -1 -1
16. Latitude: 35 25 53.23 17. Longitude: 097 22 14.36
98. Border Br. Code: Inknown (P) % Resp. : 0 99. Border Br. #: Unknown

STRUCTURE TYPE AND MATERIALS
43. Main Span Material and Design Type
Concrete Continuous Slab
44. Approach Span Material and Design Type
Not Applicable (P) Not Applicable (P)
45. No. of Spans Main Unit: 6 46. No. of Approach Spans: 0
107. Deck Type: 1 Concrete-Cast-in-Place
108A. Wearing Surface: 0 None
108B. Membrane: 0 None
108C. Deck Protection: None

AGE AND SERVICE
27. Year Built: 1962 106. Year Reconstructed: -4
28A. Lanes on: 6 28B. Lanes Under: 8 19. Detour Length: 2.0 mi
29. ADT: 5000 30. Year of ADT: 2011 109. Truck ADT %: 5
42A. Type of Service on: 5 Highway-pedestrian
42B. Type of Service under: 1 Highway

GEOMETRIC DATA
10. Inv. Rte. Min. Vert. Clr.: 328.1 ft
32. Approach Roadway Width (W/ Shoulders): 80.0 ft
Deck Area: 26,662.2 sq. ft 33. Median: 2 Closed Med w/o B
34. Skew: 23 35. Structure Flared: 0 No flare
47. Inv. Rte. Total Horiz. Clr.: 80.0 ft
48. Length Maximum Span: 60.0 ft 49. Structure Length: 303.0 ft
50A. Curb/Sdwk Wth L: 3.0 ft 50B. Curb/Sidewalk Width R: 3.0 ft
51. Width Curb to Curb: 80.0 ft 52. Width Out to Out: 88.0 ft
53. Minimum Vertical Clearance Over Bridge: 328.1 ft
54A/54B. Min. Vert. Underclearance : H Hwy beneath struct 16.4 ft
Meas. N/E S/W
E1703 E1710 EP1610 W1607 W1702 WP1701
Post. DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U DO NOT U
55A/55B. Minimum Lateral Underclearance R: H Hwy beneath struct 9.0 ft
56. Minimum Lateral Underclearance L: 18.5 ft

INSPECTION					
Type	Insp Req.	Insp Done	Freq:	Insp. Date:	Next Insp.:
NBI:		Y	24	1/27/2012	1/27/2014
Element:		Y	24	1/27/2012	1/27/2014
FC Freq.:	N	N	NA	NA	NA
UW Freq.:	N	N	NA	NA	NA
OS Freq.:	N	N	NA	NA	NA

CLASSIFICATION
12. Base Hwy Network : Not on Base Network 20. Toll Facility: 3 On free road
21. Custodian: 01 State Highway Agency 22. Owner: 01 State Highway Agency
26. Functional Class: 17 Urban Collector 37. Historical Sig.: 5 Not eligible for NRHP
100. Defense Highway: 0 Not a STRAHNET h 101. Parallel Structure: No || bridge exists
102. Dir. of Traffic: 2 2-way traffic 103. Temp. Structure: Not Applicable (P)
104. Highway System: 0 Not on NHS 105. Fed. Land Hwy 0 N/A (NBI)
110. National Truck Network: 0 Not part of na 112. NBIS Length: Long Enough

CONDITION
58. Deck: 5 Fair 59. Super.: 6 Satisfactory 60. Sub.: 5 Fair
62. Culvert: N N/A (NBI) 61. Channel/Channel Protection: N N/A (NBI)
Flowline Notes:

LOAD RATING AND POSTING
31. Design Load: 5 MS 18 (HS 20) 41. Posting status: A Open, no restriction
63. Op. Rating Method: 1 LF Load Factor-T Alt. Op. Rating Meth.: 1 LF Load Factor-To
64. Operating Rating (H / HS / 3-3): 48.4 53.4 84.5
66. Inventory Rating (H / HS / 3-3): 34.5 32.0 50.6
65. Inv. Rating Method: 1 LF Load Factor Alt. Inv. Rating Meth.: 1 LF Load Factor-T
70. Posting: 5 At/Above Legal Loads Date Rated : 12/21/2010

PROPOSED IMPROVEMENTS
94. Bridge Cost: \$2,452,692 75. Type of Work: 31 Repl-Load Capacit
95. Roadway Cost: \$4,046,942 76. Lgth. of Improvement: 313.6 ft
96. Total Cost: \$6,867,538 114. Future ADT: 8000
97. Year of Cost Est.: 2007 115. Year of Future ADT: 2031

NAVIGATION DATA
38. Navigation Control: NA-no waterway
39. Vertical Clearance: 0.0 ft 40. Horizontal Clearance: 0.0 ft
111. Pier Protection: Not Applicable (P) 116. Lift Bridge Vert. Clear.: 0.0 ft

APPRAISAL
36A. Bridge Rail: 0 Substandard 36C. Approach Rail: 0 Substandard
36B. Transition: 0 Substandard 36D. Approach Rail Ends: 0 Substandard
67. Str. Evaluation: 5 Above Min Tolerable 68. Deck Geometry: 5 Above Tolerable
69. Underclearance, Vertical and Horizontal: 2 Intolerable - Replace
71. Waterway Adequacy: N Not applicable
72. Approach Alignment: 6 Equal Min Criteria
113. Scour Critical: N Not Over Waterway

200c. Temperature: 44
200d. Weather: PARTLY CLOUDY
201. Structural Steel ASTM Desig.: -1 -1
202. Waterproof Membrane : -1
Date Installed: 1/1/1901
203. Type Exp. Dev. : Pourable
204. Type of Handrail: Concrete Post and Steel Rails
205. Material and Quantity : -1
208. Type of Abutment : Skeleton
Type of Foundation : Natural Foundation Matl.
209. Type of Pier / Found.: 8 No
No Piling or Drilled Shaft
210. Foundation Elev. -3 -3
 -1 -1 -1
211. Wear. Surf. Prot. System : None
Date Installed : 1/1/1901
213. Utilities Attached : -1
-1 -1 -1
-1 -1 -1

STATE OF OKLAHOMA BRIDGE ITEMS
214a. Posted Weight Limit: NR
b. Posted Speed Limit : 45
c. Narrow/One Lane Bridge sign : N
d. Vertical Clearance Sign: YES
Advanced Warning Sign : NO
Existing/Recommended Posting : 1700 -1
Min./ Max Vert. Clearance : 1607 1710
e. Navigation Lights : -
Working/Not Working : -
215. Overpass : A - Interstate
221. Substructure Cond. (U/W) : -
222. Fill over RCB: -1
223. Appr. Slab/Rdwy Cond.: Satisfactory
224. Critical Feature Type: -1
225. Paint Type : Not Applicable
Overcoat : 0
226. Date Painted: -1
227. Paint Coloring: -1
233. Deck Forming: Conventional Forming
236. Deck Cleaning : -1

238. School Bus Rte: Current and Desired Route
240. Appr. Roadway Type: Concrete
243. Girder Spacing : -1
244. Span Lengths :
-1 -1 -1
-1 -1 -1
245. Girder Depth : -1
246. Type of Overlay : -
246. Overlay Thickness : 0
246. Overlay Date : 1/1/1901
246. Overlay Depth Changed > 1"? No
247. Protective Systems : 1: -
2: - 3: -
4: - 5: -
248. No. of Field Splices w/ Corrosion : -1
249. Scour Crit. POA exists?: -
250. Culvert Headwall Dist.: -1
254. Thru Truss Type :
256. Chan. Profile Up/Down Stream?: -

OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 77
FO

Health Index :
67.6

NBI No.: 15573 Structure No.: 5568 0634 X Local ID:-1

Inspection Date: 1/27/2012 Reported By: GHINES
Invoice No.: -1 Inspected With: Gary Richardson
Agency : ODOT, Div. 4



Structure / Inspection Notes

G Hines inspection comments - 1/27/2012

FX - The North slopewall is breaking up near the top * The deck has a 4' wide mountable median * Satisfactory side drains * PX - Erosion is developing at the SW wing gap * Replacement bearings now in place at the abutments *

Elm.	Env.	Description	Un.	Qty.	Qty.St. 1	% 1	Qty.St. 2	% 2	Qty.St. 3	% 3	Qty.St. 4	% 4	Qty.St. 5	% 5
38	4	Reinforced Concrete Slab	(SF)	24,240	21,816	90 %	2,424	10 %	0	0 %	0	0 %	0	0 %
205	4	Reinforced Conc Column or Pile Extension	(EA)	40	21	53 %	8	20 %	11	28 %	0	0 %	0	0 %
215	4	Reinforced Conc Abutment	(LF)	191	118	62 %	47	25 %	26	14 %	0	0 %	0	0 %
234	4	Reinforced Conc Cap	(LF)	460	446	97 %	8	2 %	6	1 %	0	0 %	0	0 %
301	4	Pourable Joint Seal	(LF)	501	0	0 %	40	8 %	0	0 %	461	92 %	0	0 %
310	4	Elastomeric Bearing	(EA)	1	1	100 %	0	0 %	0	0 %	0	0 %	0	0 %
311	4	Moveable Bearing (roller, sliding, etc.)	(EA)	144	144	100 %	0	0 %	0	0 %	0	0 %	0	0 %
321	4	Reinforced Conc Approach Slab w/ or w/o AC O	(EA)	4	0	0 %	3	75 %	1	25 %	0	0 %	0	0 %
330	4	Metal Bridge Railing	(LF)	547	0	0 %	535	98 %	12	2 %	0	0 %	0	0 %
331	4	Reinforced Conc Bridge Railing	(LF)	60	58	97 %	0	0 %	0	0 %	2	3 %	0	0 %
358	4	Concrete Cracking	(EA)	1	0	0 %	0	0 %	0	0 %	1	100 %	0	0 %
659	4	Soffit of Concrete Decks and Slabs	(SF)	24,240	0	0 %	24,240	100 %	0	0 %	0	0 %	0	0 %
970	4	Wing	(EA)	4	0	0 %	0	0 %	4	100 %	0	0 %	0	0 %

Additional Elements

Elem.	Element Notes (Include Size and Location of Deterioration)
38	PX - The deck has some minor patches with some scaling and spalling is present - mainly along the outer curb areas (2006 photo). One newer asphalt patch noted in the SB lane of span #3. Lots of minor popouts noted as well. Approximately 25% of the total area is affected.
205	PX - At bent #1 the 1st column is spalled with rebar exposed (2006 photo). The 6th & 7th columns in bent #1 have smaller spalls mainly near the bottom with cracking present on #2 & 3. Some minor scaling is also present on the 6th & 7th columns. *At bent #2 there is a tiny spall on the 1st & 4th columns with small delaminations noted on the 2nd & 6th columns. *At bent #3 there is a spall on the 5th column. *Moderate spalls noted on the 3rd & 4th columns in bent #4 with delamination at the bottom of #5. *The 5th column in bent #5 has moderate spalling (2010 photo). Still solid overall.
215	PX - Large spall is present at the NW corner. Lots of small spalls on the East third of the North abutment. Light to moderate horizontal cracking with scaling are present on both abutments. Stable at this time.
234	FX - One moderate spall on the South face of the 3rd cap above the 7th column. Small spall present at the SW corner of the 4th cap & the North face below the 4th beam. Rebar chair stains noted on the 2nd cap between the 6th & 7th columns. Small delaminations present on the 1st cap; one at the South face above the 4th column & at the NE area. On the 2nd cap there are delaminations at the East & North areas of bent #2. Minor cracking noted on the NE area of 4th cap, SE area of 3rd cap, & both ends of 2nd cap. Satisfactory condition overall.
301	PX - The sealant over the abutments has lost most of its adhesion and is allowing debris and water to pass through. There is some minor chipping of the deck present along the abutment joints. Each joint needs completely redone. There is a full-length joint down the median that needs to be sealed also.
310	There is one solid pad end to end on bent #3 (w/o steel element). Supplement bearings have been removed at the abutments.
311	FX - ALL ABUTMENT ROLLERS HAVE BEEN REPLACED BY THE PERRY BRIDGE CREW (PHOTOS). THE SOUTH ABUTMENT BEARING STILL NEED TO BE PAINTED. ALSO, THE UPPER 'EARS' DON'T LINE UP WITH THE ORIGINAL HOLES DUE TO DECK ROTATION.
321	PX - The NW approach slab is badly broken with areas of upheaval (2006 photo). The NW & NE slabs also have deep spalling along the bridge deck (5/2011 photo @ NE). The SE & SW slabs have minor to moderate cracking - all 4 have minor wear. PX - The SW slab has shoved about 4 inches from the bridge deck causing erosion to develop under the slab *
330	FX - The steel portion of the railing has moderate freckle rust overall. Two sections on the East are weakened due to post condition (see element #331).
331	FX - The 8th post from the NE is cracked loose at the sidewalk level. Still attached well by the rebar system. The remaining concrete portions have minor weathering overall.
358	PX - The deck is entirely covered with pattern cracking - the cracks are of minor to severe in size & density. There is not a 6" X 6" area that does not have a crack of some size. The deck really needs a high-density overlay or epoxy flood coat soon.
659	There are 5 longitudinal construction joints in each span. Most have some minor seepage with stains & light efflorescence started. The fascia areas have some discoloration & light cracking. Less than 10% of the total area is affected.
970	PX - The SW wing is completely broken away from the abutment & leaning badly (2008 photo). It is no longer being held up by the exposed rebar. Some loss of fill is causing settlement along the grassy shoulder area. The NE wing leans badly as well but is still attached via the rebar. The SE & NW wings are cracked (CS 2) but still functioning as intended. The SW & NE needs attention soon.

Roadway Name :	NBI Information Applicable To The Route Under The Structure	
5. Inventory Route (Route Under Structure : A - 1 - 1 - 00040 - 0	28b. Lanes Und.: 6	102. Traffic Dir.: 2 2-way traffic
10. Min. Vert. Clr.(ft.): 16.4	29. ADT : 50900	104. Highway System : 1 On the NHS
12. Base Hwy Network : On Base Network	32. Appr. Roadway Width (ft.) : 92.0	105. Fed Land Hwy : 0 N/A (NBI)
13. LRS Inv. Rt./ Subroute : 5568HP0000 / 07	47. Total Horiz. Clr.(ft.): 52.0	109. Truck ADT% : 12
19. Detour Len.(Mi.): 0.0	51. Roadway Width (ft.) : 92.0	110. Natl. Truck Network : 1 Part of natl network
20. Toll Facility : 3 On free road	100. Defense Highway : 1 On Interstate STRAHNET	114. Future ADT : 81440
26. Function Class.: 11 Urban Interstate		

OKLAHOMA DEPARTMENT OF TRANSPORTATION - Bridge Inspection Report

Suff. Rating: 77
FO

Health Index :
67.6

NBI No.: 15573 Structure No.: 5568 0634 X Local ID:-1

Roadway Name : DOUGLAS W RAMP TO EB I			NBI Information Applicable To The Route Under The Structure		
5. Inventory Route (Route Under Structure : B - 3 - 7 - 00040 - 0	28b. Lanes Und.: 2	102. Traffic Dir.: 1 1-way traffic	104. Highway System : 0 Not on NHS	105. Fed Land Hwy : 0 N/A (NBI)	109. Truck ADT% : 7
10. Min. Vert. Clr.(ft.): 16.8	29. ADT : 5000	110. Natl. Truck Network : 0 Not part of natl netwo	114. Future ADT : 8000		
12. Base Hwy Network : Not on Base Network	32. Appr. Roadway Width (ft.) : 46.0				
13. LRS Inv. Rt./ Subroute : -1 / -1	47. Total Horiz. Clr.(ft.): 46.0				
19. Detour Len.(Mi.): 0.0	51. Roadway Width (ft.) : 46.0				
20. Toll Facility : 3 On free road	100. Defense Highway : 0 Not a STRAHNET hwy				
26. Function Class.: 17 Urban Collector					

Roadway Name : DOUGLAS E RAMP TO WB I			NBI Information Applicable To The Route Under The Structure		
5. Inventory Route (Route Under Structure : C - 3 - 7 - 00040 - 0	28b. Lanes Und.: 2	102. Traffic Dir.: 1 1-way traffic	104. Highway System : 0 Not on NHS	105. Fed Land Hwy : 0 N/A (NBI)	109. Truck ADT% : 7
10. Min. Vert. Clr.(ft.): 17.1	29. ADT : 5000	110. Natl. Truck Network : 0 Not part of natl netwo	114. Future ADT : 8000		
12. Base Hwy Network : Not on Base Network	32. Appr. Roadway Width (ft.) : 46.0				
13. LRS Inv. Rt./ Subroute : -1 / -1	47. Total Horiz. Clr.(ft.): 46.0				
19. Detour Len.(Mi.): 0.0	51. Roadway Width (ft.) : 80.0				
20. Toll Facility : 3 On free road	100. Defense Highway : 0 Not a STRAHNET hwy				
26. Function Class.: 17 Urban Collector					



Oklahoma Department of Transportation

Project Management Division (405)522-7601 Fax (405) 522-7612 Room 3C9

DATE: May 5, 2012
TO: Distribution List
FROM: Project Management Division
SUBJECT: Draft - Project Initiation

J/P Number: 28992(04) County: Oklahoma Highway: I-40 Division: 4
PS&E Date: 05/2017 R/W Date : N/A Drive-out Date:
Programmed Estimate: \$ 18,000,000.00
Project Description: Douglas Blvd. Bridge Replacement & Interchange Reconstruction 6.5 Miles East of I-35 (Includes removal of Engle Rd. bridge).

Drive-out Attendees:
Kyle McKinley – Project Management Division

FUNCTIONAL CLASSIFICATION

Area Type: Urban Suburban Rural
Terrain Type: Flat Rolling Mountainous
Access Control: Full Partial None
Highway Type: Freeway Principal Arterial Minor Arterial Collector
 NHS Non-NHS STRAHNET Scenic Hwy

EXISTING INFORMATION

Current ADT: 51,200 % Trucks: Number of Lanes: 4 Lane Width: 12'
Outside Shoulder Width: 10' Inside Shoulder Width: 4'
 Open Section Curb & Gutter Divided, median width: 40', Cable Barrier
 Other (describe):
Pavement Type: Asphalt Pavement Condition: Good Fair Poor
Shoulder Type: Paved Shoulder Condition: Good Fair Poor
Storm Sewer No Yes Storm Sewer Condition: Good Fair Poor
Sidewalks No Yes Sidewalk Width:
Bridge One Description: 41'-55'-60'-60'-50'-41' Cont. Concrete Slab Spans with 2-3' Sidewalks
Bridge Two Description: 41'-62'-62'-41' Cont. Concrete Slab Spans with 2-3' Sidewalks
Bridge Three Description:

	Bridge One	Bridge Two	Bridge Three
Feature Intersected:	I-40	I-40	
NBI Number(s):	15573	15560	
Location Number(s):	5568 0634X	5568 0608X	
Sufficiency Rating(s):	77.0	79.6	
Year(s) Built:	1962	1962	
Bridge Width(s):	88'	33.9'	
Bridge Length(s):	303'	206'	

Posted Clearance(s): 17'00" 15'06"
Posted: Open, no restrictions Open, no restrictions
Health Index: 67.61 79.31

ENVIRONMENTAL CONSIDERATIONS

- Historic Properties, list:
- Archeological Sites, list:
- Cemeteries, list:
- Hazardous Waste / LUST Sites, list:
- Endangered Species, list:
- Section 4F or 6F Properties, list:
- Farmland Wetlands Scenic and Protected Aquifers 100 Year Flood Plain

ALTERNATIVE IMPACTS

- Other Agencies List:
- Turnpike Involvement
- Metropolitan Planning Organizations List:

PERMIT INFORMATION

Design Exception Anticipated: No As required by design Yes, type:
Maintenance Agreements (Lighting, Signals, etc.): No Yes, type:
Permits required: FAA USACE OWRB Railroad Other, type:
Additional:

PROPOSED IMPROVEMENT

Project Intent: Replace 2 functionally obsolete bridges.

Special Considerations: None

Description of Proposed Improvements:

Design Speed:

Project Termini

Beginning of Project:

End of Project:

Limits of Survey:

Limits of NEPA Survey Area:

Typical Section

- Open Section Curb & Gutter Divided, median width:
- Other (describe):
- Number of Lanes: Lane Width: 12'
- Outside Shoulder Width: 10' Inside Shoulder Width: 4'
- Storm Sewer No Yes Sidewalks No Yes, width:
- Overlay No Yes, thickness:
- Coldmill No Yes, thickness:
- Add Shoulders No Yes, width:

Bridge Width:

Alignment

- Existing
- New, located North or South or East or West of existing
- Parallel Lanes, located North or South or East or West of existing
- Spot Improvements
- Horizontal, Description:
- Vertical, Description:

Detour

- Shoo-fly, located North or South or East or West of existing
- Widening, located North or South or East or West of existing
- Crossovers
- Close Road
- Signed Detour, Route Description:
- Phased Construction, Description:

Traffic Items

- Traffic Management Plan No Yes
- Median Barrier No Yes
- New Guardrail No Yes
- End Treatment No Type:
- Highway Lighting No Outside or Median
- Traffic Signals No Location(s):

Right-of-Way

- Additional RW Required No Yes, describe:
- Utility Conflicts No Yes, describe:

Miscellaneous

- Channel Re-Alignment No Yes, describe:

INITIATION ESTIMATE

Roadway:	\$	Total Construction:	\$
Bridge:	\$		
Traffic Control:	\$	Right-of-Way:	\$
Signing and Striping:	\$	Utility:	\$
Highway Lighting:	\$		
Traffic Signals:	\$	Total Estimate:	\$
Mobilization:	\$		
Staking:	\$		
E & C:	\$		

PROGRAM REVISIONS

Estimate: \$
Work Type:
Description:

Letting Date:

Project Length:

Attachments (Aerial with Preliminary RW & County Map)

Distribution List:

- Director of Engineering
- Director of Capital Projects and Information Management
- Bridge Division
- Environmental Programs Division
- FHWA
- Field Division
- Project Management Division
- Right-of-Way Division
- Roadway Design
- Survey Division
- Traffic Engineering

Transportation Improvement Program for the OCARTS Transportation Management Area

FFY 2017 - FFY 2020
(October 1, 2016 - September 30, 2020)



Association of Central Oklahoma Governments
21 East Main Street, Suite 100
Oklahoma City, OK 73104-2405
Telephone: (405) 234-ACOG (2264)
Fax: (405) 234-2200
www.acogok.org

*Adopted by the Intermodal Transportation Policy Committee
and Endorsed by the ACOG Board of Directors
on June 30, 2016*

*Approved by the Oklahoma Department of Transportation
on July 14, 2016*

Preparation of this report was financially aided through funds provided by the U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration), the Oklahoma Department of Transportation and local contributions.

FFY 2017-FFY 2020 TIP for the OCARTS TMA

Updated by the MPO 11/17/16

Highway Element Oklahoma Department of Transportation Projects FFY 2020

County	Project Description	Job Number	Length (miles)	Funding Source	Estimated Federal Share	Estimated State Share	Other	Total
Canadian County	I-40: Interchange at Frisco Road, 4.5 mi. W of the Kilpatrick Turnpike Junction (Interchange)	30715(04)	0.330	TBD	9,068,800	2,267,200	6,104,000	17,440,000
Cleveland County	SH-9: From 108th Ave. E, E to 156th Ave. E (South) in Norman (RW for 20266(14)) (Right of Way)	20266(15)	4.600	TBD	0	2,452,500	0	2,452,500
Cleveland County	SH-9: From 108th Ave. E, E to 156th Ave. E (South) in Norman (UT for 20266(14)) (Utilities)	20266(16)	4.600	TBD	654,000	163,500	0	817,500
Grady County	SH-39 From East Side of East Winter Creek, Extend East 1.79 Miles to SH-76 in McClain County (Grade, Drain & Surface) (Partially in OCARTS)	20302(07)	5.440	NHY	3,522,358	880,590	0	4,402,948
McClain County	SH-24 begin 3.48 mi. N of Jct. SH-59, Extend N 2.62 mi. (RW for 31058(04)) (Right of Way)	31058(05)	2.620	TBD	0	327,000	0	327,000
McClain County	SH-24 begin 3.48 mi. N of Jct. SH-59, Extend N 2.62 mi. (UT for 31058(04)) (Utilities)	31058(06)	2.620	TBD	130,800	32,700	0	163,500
Oklahoma County	I-35: Over the I-240 Jct. Reconstruct Interchange (Phase IB) (Interchange)	09032(05)	1.000	NHPP	12,772,000	3,193,000	0	15,965,000
Oklahoma County	I-44: Westbound to Northbound Ramps at I-44/I-235 Interchange (Segment 3A) (Grade, Draining, Bridge & Surface)	09033(28)	0.350	TBD	19,200,000	4,800,000	0	24,000,000
Oklahoma County	I-40: Douglas Blvd. Bridge Replacement & Interchange Reconstruction 6.5 mi. E of I-35 (Includes removal of Engle Rd. Br.) (Interchange)	28992(04)	0.100	TBD	12,360,000	3,090,000	0	15,450,000

November 28, 2016

Subject: I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction, Oklahoma County, Oklahoma, JP 28992(04), Project Number J2-8992(004)

Dear Property Owner:

We are pleased to inform you the Oklahoma Department of Transportation (ODOT) is considering improvements to the subject highway. The exact project scope and requirements will be clarified through the planning, environmental review, and design process. In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and Federal Highway Administration policy, the Department is requesting any information or specific concerns you may have regarding this project's potential impact on the human environment, the natural environment, and historic properties.

Additionally, in the near future, employees or authorized agents of ODOT may be entering your property for the purposes of surveying environmental considerations, such as cultural resources, biological resources, or hazardous materials. Results from these studies will be incorporated into the environmental report being prepared for the project. It may be necessary to do minor hand digging in your property as part of the survey. Any test holes will be filled in and cleaned up afterwards.

Oklahoma Statute 69-702 provides for the Department of Transportation, through its agents and employees, to enter the property and make the necessary surveys and other examinations related to the proposed highway project. A copy of Oklahoma Statute 69-702 is provided with this letter.

If you are currently leasing this property, please notify your lessee of our planned work.

Should you have any information or specific concerns, please contact our authorized agent Diane Abernathy, Triad Design Group at 405-919-0481 or dabernathy@triaddesigngroup.com. As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/TV/DA

Enclosures: Location Map, Copy of OK Statute 69-702

Copy to: Project Management
Brian Taylor, Division 4 Engineer
Survey Division
Materials Division
Right-of-Way Division
ODOT Cultural Resources Specialist
Specialists



Environmental Programs Division

200 N.E. 21st Street
Oklahoma City, OK 73105-3204
www.odot.org

November 28, 2016

Mr. Dan Deerinwater
Regional Director
Southern Plains Regional Office
Bureau of Indian Affairs
P.O. Box 368
Anadarko, Oklahoma 73005

Subject: I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction, Oklahoma County, Oklahoma, JP 28992(04), Project Number J2-8992(004)

Dear Mr. Deerinwater:

We are pleased to inform you the Oklahoma Department of Transportation (ODOT) is considering improvements to the subject bridge and interchange. The exact project scope and requirements will be clarified through the planning, environmental review, and design process. We have enclosed a location map and the environmental study area.

This project is in the early developmental stages and any comments relative to the social, economic, or environmental effects of this proposal will be appreciated. To allow adequate time for evaluation of your comments, we would appreciate receiving a response within fifteen days from the date of this letter. Your written comments should be directed to the Environmental Programs Division Engineer, Oklahoma Department of Transportation, 200 N. E. 21st Street, Oklahoma City, Oklahoma 73105.

We sincerely appreciate your cooperation in this matter. For further information or if you have any questions, please contact Tim Vermillion, Environmental Project Manager at 405-521-2676 or tvermillion@odot.org, or our authorized agent Diane Abernathy, Triad Design Group at 405-919-0481 or dabernathy@triaddesigngroup.com. As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/TV/DA

Enclosures: Location Map, Study Area Map

Copy to: Project Management Division
Field Division Engineer
Right-of-Way Division
ODOT Cultural Resources

"The mission of the Oklahoma Department of Transportation is to provide a safe, economical, and effective transportation network for the people, commerce and communities of Oklahoma."

AN EQUAL OPPORTUNITY EMPLOYER

November 28, 2016

Mr. John Ledbetter
Realty Specialist – Oklahoma Field Office
Bureau of Land Management
201 Stephenson Parkway, Suite 1200
Norman, Oklahoma 73072-2037

Subject: I-40/Douglas Boulevard Bridge Replacement and Interchange Reconstruction, Oklahoma County, Oklahoma, JP 28992(04), Project Number J2-8992(004)

Dear Mr. Ledbetter:

We are pleased to inform you the Oklahoma Department of Transportation (ODOT) is considering improvements to the subject bridge and interchange. The exact project scope and requirements will be clarified through the planning, environmental review, and design process. We have enclosed a location map and the environmental study area.

This project is in the early developmental stages and any comments relative to the social, economic, or environmental effects of this proposal will be appreciated. To allow adequate time for evaluation of your comments, we would appreciate receiving a response within fifteen days from the date of this letter. Your written comments should be directed to the Environmental Programs Division Engineer, Oklahoma Department of Transportation, 200 N. E. 21st Street, Oklahoma City, Oklahoma 73105.

We sincerely appreciate your cooperation in this matter. For further information or if you have any questions, please contact Tim Vermillion, Environmental Project Manager at 405-521-2676 or tvermillion@odot.org, or our authorized agent Diane Abernathy, Triad Design Group at 405-919-0481 or dabernathy@triaddesigngroup.com. As always, your cooperation is greatly appreciated.

Respectfully,

Siv Sundaram, P.E.
Environmental Programs Division Engineer

SS/TV/DA

Enclosures: Location Map, Study Area Map

Copy to: Project Management Division
Field Division Engineer
Right-of-Way Division
ODOT Cultural Resources

Oklahoma §69-702

The Department, through its authorized agents and employees, may enter upon any lands, waters, and premises in the state for the purpose of making surveys, soundings and drillings, and examinations as may be determined necessary or convenient for the purpose of establishing, locating, relocating, constructing, and maintaining state highways or relocations thereof and facilities necessary and incidental thereto. Such entry shall not be deemed a trespass, nor shall an entry for such purpose be deemed an entry under any condemnation proceedings which may be then pending; but notice shall be given to the owner of or person residing on the premises, personally or by registered mail, at least ten (10) days prior to such entry.

NEWAY FAMILY PARTNERS
PO BOX 50471
MIDWEST CITY, OK 73140-5471

TWODSVENTURE1, LLC
252 NW 70TH ST
OKLAHOMA CITY, OK 73116-7807

N R FARD INC
405 WALTHAM ST #189
LEXINGTON, MA 02421-7934

STANLEY, INC
6508 S COUNTRY CLUB DRIVE
OKLAHOMA CITY, OK 73159-2942

AMPLE STORAGE LLC
4117 S POST RD
OKLAHOMA CITY, OK 73150

VIERSEN OIL & GAS CO
PO BOX 702708
TULSA, OK 74170-2708

PINKERTON, SUE CARMEL
1701 E FAIRLAWN
CUSHING, OK 74023-5755

MIDWEST CITY MEMORIAL HOSPITAL
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4319

CITY OF MIDWEST CITY
ATTENTION: COUNTY CLERK
100 N MIDWEST BLVD
MIDWEST CITY, OK 73110-4327

JOHNSON, DONNIE B & JOANN
14050 HUMMINGBIRD DRIVE
CHOCTAW, OK 73020-7018

GRIFFIN PROPERTIES OKC LLC
MCDONALDS CORP
PO BOX 182571
COLUMBUS, OH 43218

LEX LLC
PO BOX 10537
MIDWEST CITY, OK 73140-1537

GRIFFIN PROPERTIES OKC, LLC
3025 GRIFFIN CENTER
OKLAHOMA CITY, OK 73150-1000

GRIFFIN PROPERTIES OKC, LLC
C/O LJS #24034
1024 SERPENTINE LN , STE 101
PLEASANTON, C , 94566

2917 S DOUGLAS LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

SHAW INVESTMENT PROPERTIES, LLC
C/O SAVAGE SAVAGE AND BROWN
PO BOX 22845
OKLAHOMA CITY, OK 73123

WATERMARKED KH LLC
PO BOX 300125
MIDWEST CITY, OK 73140-0125

GRIFFIN JACK L & RUTH M
3025 GRIFFIN CTR
OKLAHOMA CITY, OK 73150-1000

Mr. John Ledbetter
Realty Specialist – Oklahoma Field Office
Bureau of Land Management
201 Stephenson Parkway, Suite 1200
Norman, Oklahoma 73072-2037

Mr. Dan Deerinwater, Regional Director
Southern Plains Regional Office
Bureau of Indian Affairs
P.O. Box 368
Anadarko, Oklahoma 73005



November 28, 2016

Mr. Tim Vermillion
Oklahoma Department of Transportation
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

Re: Landowner Notice Letters, I-40/Douglas, Oklahoma County, JP 28992(04)

Dear Tim:

This letter is to document that Triad Design Group mailed 18 landowner notice letters, as well as letters to the Bureau of Land Management and Bureau of Indian Affairs, for the above-referenced project on November 28, 2016. All letters were sent via USPS.

I personally checked the contents of all the envelopes, and checked that the name on the letter matched the envelope address. If you have any comments or questions, please feel free to call me at 405-919-0481.

Sincerely,

A handwritten signature in cursive script that reads 'Diane Abernathy'.

Diane Abernathy, P. E.
Senior Project Manager

Triad Project E211-06



December 23, 2016

Mr. Tim Vermillion
Oklahoma Department of Transportation
200 N. E. 21st Street
Oklahoma City, OK 73105-3204

Re: Public Meeting Letters, I-40 and Douglas, JP 28992(04)

Dear Tim:

This letter is to document that Triad Design Group mailed 20 solicitation letters, 50 officials letters, and 26 landowner/utility letters for the above-referenced project on December 23, 2016. All letters were sent via USPS.

I personally checked the contents of all the envelopes, and checked that the letter inside address matched the envelope address. If you have any comments or questions, please feel free to call me at 405-919-0481.

Sincerely,

A handwritten signature in cursive script that reads 'Diane Abernathy'.

Diane Abernathy, P. E.
Senior Project Manager

Triad Project E211-06

Airports Near I-40/Douglas

Type	Location ID	Facility Name	Ownership	Use	Owner	Owner Address	Latitude	Longitude
AIRPORT	KTIK	Tinker Air Force Base	Public	Military	U. S. Air Force	2854th Air Base GP (AFLC) Tinker AFB, Oklahoma City, OK 73145	35-25.74 N	097-22.93 W