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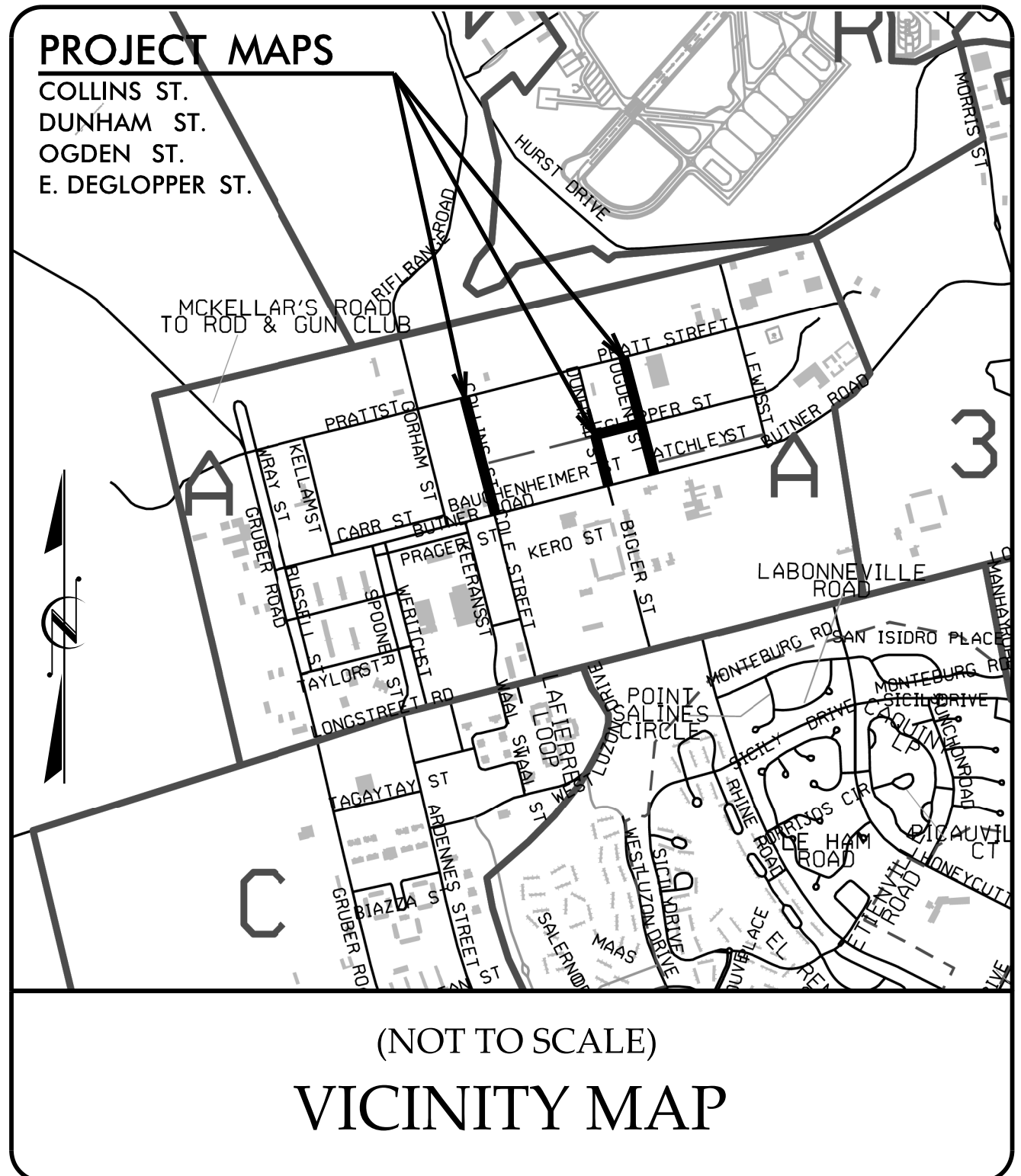
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09_08/24

CONTRACT: DF00478 TIP PROJECT: 49218.9, 49218.15

See Sheet 1A For Index of Sheets
See Sheet 1B For Symbols Sheet



(NOT TO SCALE)
VICINITY MAP

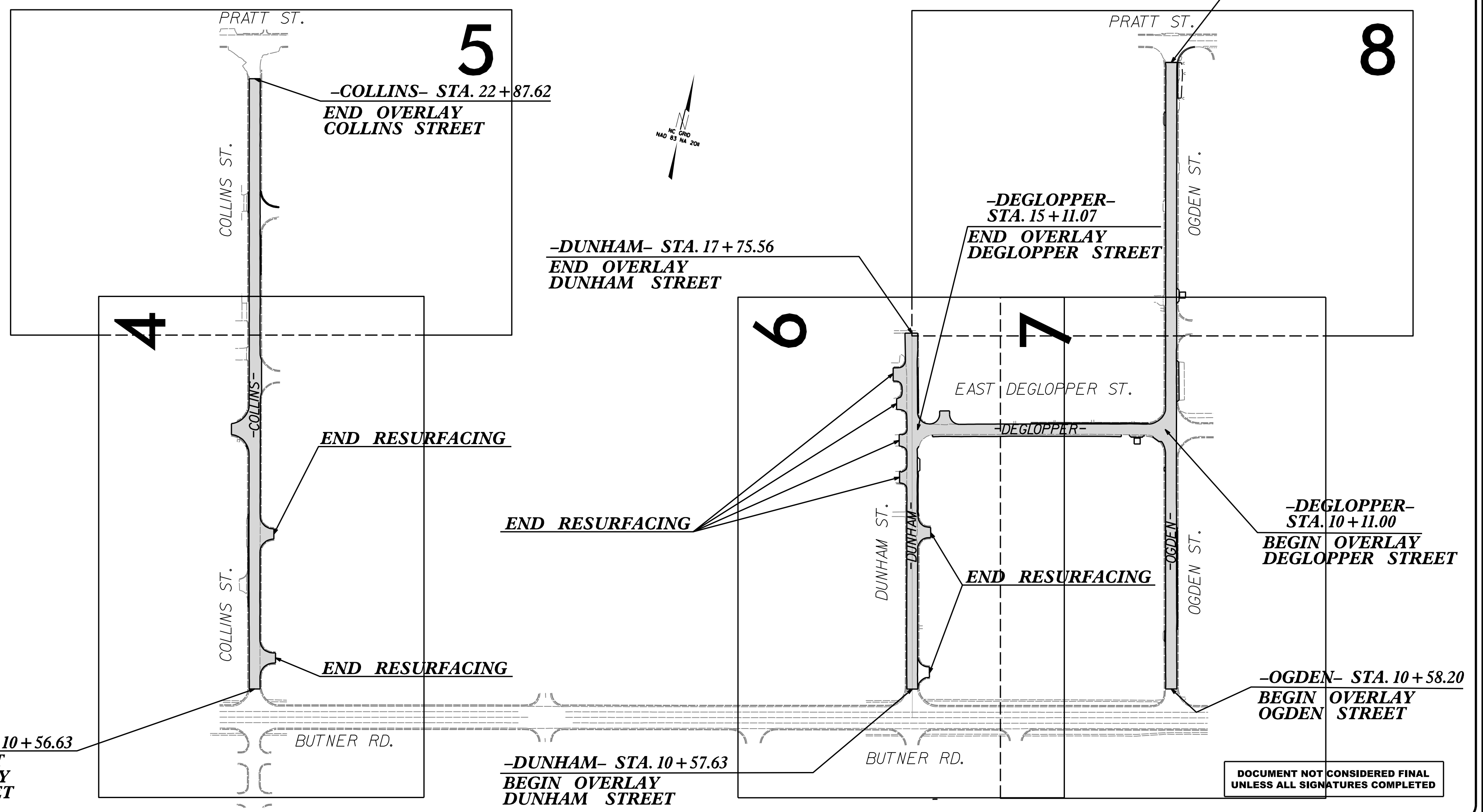
PROJECT IS INSIDE LIMITS OF FORT LIBERTY

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

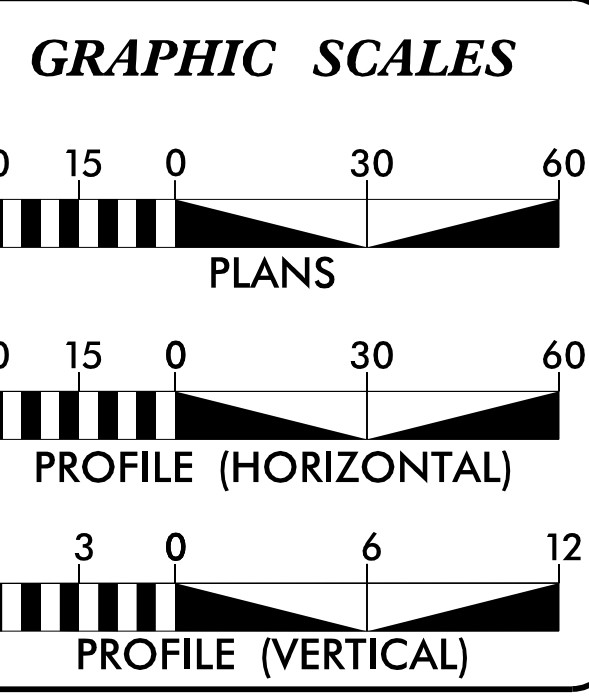
LOCATION: COLLINS STREET FROM BUTNER ROAD TO PRATT STREET
DUNHAM STREET FROM BUTNER ROAD TO THE PARKING LOT
OGDEN STREET FROM BUTNER ROAD TO PRATT STREET
EAST DEGLOPPER STREET FROM DUNHAM STREET TO OGDEN ROAD

TYPE OF WORK: RESURFACING, PAVEMENT REHABILITATION, MILLING,
GRADING, DRAINAGE IMPROVEMENTS, CURB AND GUTTER
AND PAVEMENT MARKINGS



FINAL PLANS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49218.9, 49218.15	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
49218.9, 49218.15		PE	
49218.9, 49218.15		CONST.	



PROJECT LENGTH	
PROJECT 49218.9 COLLINS STREET	= 0.233 MILES
PROJECT 49218.15 DUNHAM STREET	= 0.136 MILES
PROJECT 49218.15 OGDEN ROAD	= 0.239 MILES
PROJECT 49218.15 EAST DEGLOPPER STREET	= 0.099 MILES
TOTAL LENGTH TIP PROJECT 49218.9, 49218.15 = 0.707 MILES	

Prepared for Fort Liberty
in the Office of:

WETHERILL ENGINEERING
1223 JONES FRANKLIN ROAD
Raleigh, N.C. 27606
Phone: 919 851 8077
Fax: 919 851 8077

2024 NCDOT STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: AUGUST 21, 2024

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

R.K. MURPHY, JR., PE
PROJECT DESIGN ENGINEER

NCDOT CONTACT:

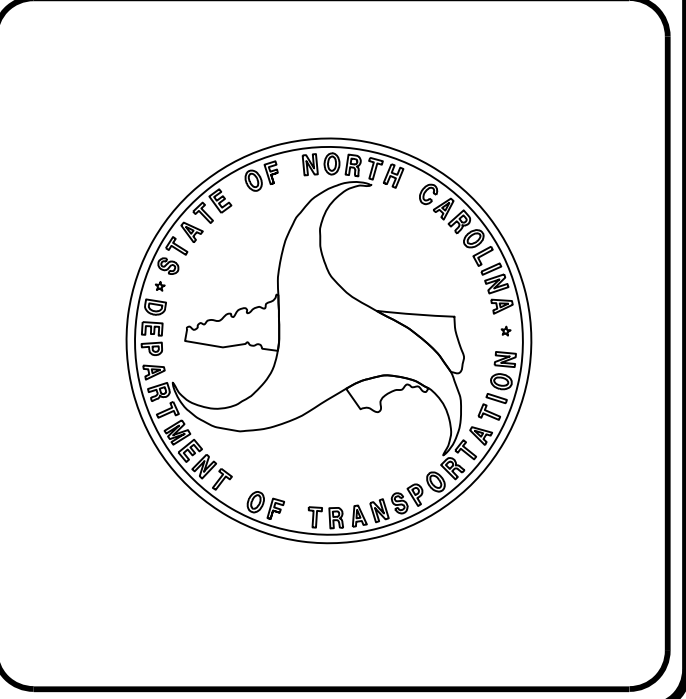
CHRISTY W. HUFF, PE
DIVISION PROJECT MANAGER

HYDRAULICS ENGINEER
7/11/2024

Jerry L. Lindsey, P.E.
SIGNATURE

ROADWAY DESIGN ENGINEER
7/11/2024

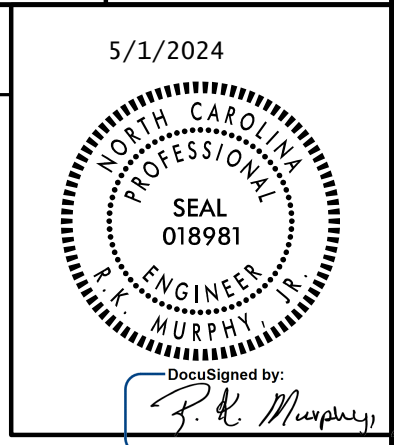
R.K. Murphy, P.E.
SIGNATURE



7/11/2024
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USER:skennedy

8/17/99

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GENERAL NOTES

GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE COMMUNICATIONS - NEC,
GAS - PNG, POWER - SANDHILLS, WATER - ASUS
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-16-2024
REV.

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.54	Manhole Frame and Cover
840.55	Manhole Frame and Cover (Flush with Slab for Open Throat Catch Basin)
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	SYMBOLGY SHEET
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1 THRU 2C-2	ROADWAY SPECIAL DETAILS
3B-1 THRU 3B-2	SUMMARY OF QUANTITIES
3D-1	DRAINAGE SUMMARY SHEET
4 THRU 11	PLAN AND PROFILE SHEETS
TMP-01 THRU TMP-04	TRAFFIC MANAGEMENT PLANS
PMP-01 THRU PMP-03	PAVEMENT MARKING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
X-1 THRU X-16	COLLINS, DUNHAM, OGDEN, E. DEGLOPPER CROSS SECTIONS

49218.9, 49218.15
FORT LIBERTY RESURFACING

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STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	-----	
County Line	-----	
Township Line	-----	
City Line	-----	
Reservation Line	-----	
Property Line	-----	
Existing Iron Pin (EIP)	-----	○
Computed Property Corner	-----	×
Existing Concrete Monument (ECM)	-----	□
Parcel/Sequence Number	-----	(23)
Existing Fence Line	-----	-x-x-x-
Proposed Woven Wire Fence	-----	○
Proposed Chain Link Fence	-----	□
Proposed Barbed Wire Fence	-----	◇
Existing Wetland Boundary	-----	-WLB-
Proposed Wetland Boundary	-----	-WLB-
Existing Endangered Animal Boundary	-----	-EAB-
Existing Endangered Plant Boundary	-----	-EPB-
Existing Historic Property Boundary	-----	-HPB-
Known Contamination Area: Soil	-----	-S-S-
Potential Contamination Area: Soil	-----	-S-S-
Known Contamination Area: Water	-----	-W-W-
Potential Contamination Area: Water	-----	-W-W-
Contaminated Site: Known or Potential	-----	☠ ☢

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	-----	○
Sign	-----	○
Well	-----	○
Small Mine	-----	×
Foundation	-----	□
Area Outline	-----	□
Cemetery	-----	+
Building	-----	□
School	-----	□
Church	-----	□
Dam	-----	□

HYDROLOGY:

Stream or Body of Water	-----	
Hydro, Pool or Reservoir	-----	
Jurisdictional Stream	-----	JS
Buffer Zone 1	-----	BZ 1
Buffer Zone 2	-----	BZ 2
Flow Arrow	-----	←
Disappearing Stream	-----	→
Spring	-----	○
Wetland	-----	↓
Proposed Lateral, Tail, Head Ditch	-----	→
False Sump	-----	▽

RAILROADS:

Standard Gauge	-----	CSX TRANSPORTATION
RR Signal Milepost	-----	MILEPOST 35
Switch	-----	SWITCH
RR Abandoned	-----	
RR Dismantled	-----	

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	-----	○
Primary Horiz and Vert Control Point	-----	●
Secondary Horiz and Vert Control Point	-----	◆
Vertical Benchmark	-----	⊕
Existing Right of Way Monument	-----	△
Proposed Right of Way Monument (Rebar and Cap)	-----	▲
Proposed Right of Way Monument (Concrete)	-----	▲
Existing Permanent Easement Monument	-----	◇
Proposed Permanent Easement Monument (Rebar and Cap)	-----	◇
Existing C/A Monument	-----	△
Proposed C/A Monument (Rebar and Cap)	-----	▲
Proposed C/A Monument (Concrete)	-----	▲
Existing Right of Way Line	-----	○
Proposed Right of Way Line	-----	○
Existing Control of Access Line	-----	○
Proposed Control of Access Line	-----	○
Proposed ROW and CA Line	-----	○
Existing Easement Line	-----	E
Proposed Temporary Construction Easement	-----	E
Proposed Temporary Drainage Easement	-----	TDE
Proposed Permanent Drainage Easement	-----	PDE
Proposed Permanent Drainage/Utility Easement	-----	DUE
Proposed Permanent Utility Easement	-----	PUE
Proposed Temporary Utility Easement	-----	TUE
Proposed Aerial Utility Easement	-----	AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----	
Existing Curb	-----	
Proposed Slope Stakes Cut	-----	C
Proposed Slope Stakes Fill	-----	F
Proposed Curb Ramp	-----	CR
Existing Metal Guardrail	-----	T
Proposed Guardrail	-----	T
Existing Cable Guiderail	-----	T
Proposed Cable Guiderail	-----	T
Equality Symbol	-----	⊕
Pavement Removal	-----	⊗
VEGETATION:		
Single Tree	-----	○
Single Shrub	-----	○
Hedge	-----	~

Woods Line	-----	~
Orchard	-----	○
Vineyard	-----	○

EXISTING STRUCTURES:

MAJOR:		
Bridge, Tunnel or Box Culvert	-----	CONC
Bridge Wing Wall, Head Wall and End Wall	-----	CONC WW
MINOR:		
Head and End Wall	-----	CONC HW
Pipe Culvert	-----	
Footbridge	-----	
Drainage Box: Catch Basin, DI or JB	-----	CB
Paved Ditch Gutter	-----	
Storm Sewer Manhole	-----	⊕
Storm Sewer	-----	S

UTILITIES:

* SUE - Subsurface Utility Engineering
LOS - Level of Service - A, B, C or D (Accuracy)

POWER:		
Existing Power Pole	-----	●
Proposed Power Pole	-----	○
Existing Joint Use Pole	-----	●
Proposed Joint Use Pole	-----	○
Power Manhole	-----	⊕
Power Line Tower	-----	⊗
Power Transformer	-----	⊗
U/G Power Cable Hand Hole	-----	PH
H-Frame Pole	-----	●
U/G Power Line Test Hole (SUE - LOS A)*	-----	⊕
U/G Power Line (SUE - LOS B)*	-----	P
U/G Power Line (SUE - LOS C)*	-----	P
U/G Power Line (SUE - LOS D)*	-----	P

TELEPHONE:

Existing Telephone Pole	-----	●
Proposed Telephone Pole	-----	○
Telephone Manhole	-----	⊕
Telephone Pedestal	-----	⊕
Telephone Cell Tower	-----	⊕
U/G Telephone Cable Hand Hole	-----	PH
U/G Telephone Test Hole (SUE - LOS A)*	-----	⊕
U/G Telephone Cable (SUE - LOS B)*	-----	T
U/G Telephone Cable (SUE - LOS C)*	-----	T
U/G Telephone Cable (SUE - LOS D)*	-----	T
U/G Telephone Conduit (SUE - LOS B)*	-----	TC
U/G Telephone Conduit (SUE - LOS C)*	-----	TC
U/G Telephone Conduit (SUE - LOS D)*	-----	TC
U/G Fiber Optics Cable (SUE - LOS B)*	-----	TF
U/G Fiber Optics Cable (SUE - LOS C)*	-----	TF
U/G Fiber Optics Cable (SUE - LOS D)*	-----	TF

WATER:

Water Manhole	-----	⊕
Water Meter	-----	○
Water Valve	-----	⊗
Water Hydrant	-----	⊕
U/G Water Line Test Hole (SUE - LOS A)*	-----	⊕
U/G Water Line (SUE - LOS B)*	-----	W
U/G Water Line (SUE - LOS C)*	-----	W
U/G Water Line (SUE - LOS D)*	-----	W
Above Ground Water Line	-----	A/G Water

TV:

TV Pedestal	-----	⊕
TV Tower	-----	⊗
U/G TV Cable Hand Hole	-----	PH
U/G TV Test Hole (SUE - LOS A)*	-----	⊕
U/G TV Cable (SUE - LOS B)*	-----	TV
U/G TV Cable (SUE - LOS C)*	-----	TV
U/G TV Cable (SUE - LOS D)*	-----	TV
U/G Fiber Optic Cable (SUE - LOS B)*	-----	TV FO
U/G Fiber Optic Cable (SUE - LOS C)*	-----	TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	-----	TV FO

GAS:

Gas Valve	-----	◇
Gas Meter	-----	⊕
U/G Gas Line Test Hole (SUE - LOS A)*	-----	⊕
U/G Gas Line (SUE - LOS B)*	-----	G
U/G Gas Line (SUE - LOS C)*	-----	G
U/G Gas Line (SUE - LOS D)*	-----	G
Above Ground Gas Line	-----	A/G Gas

SANITARY SEWER:

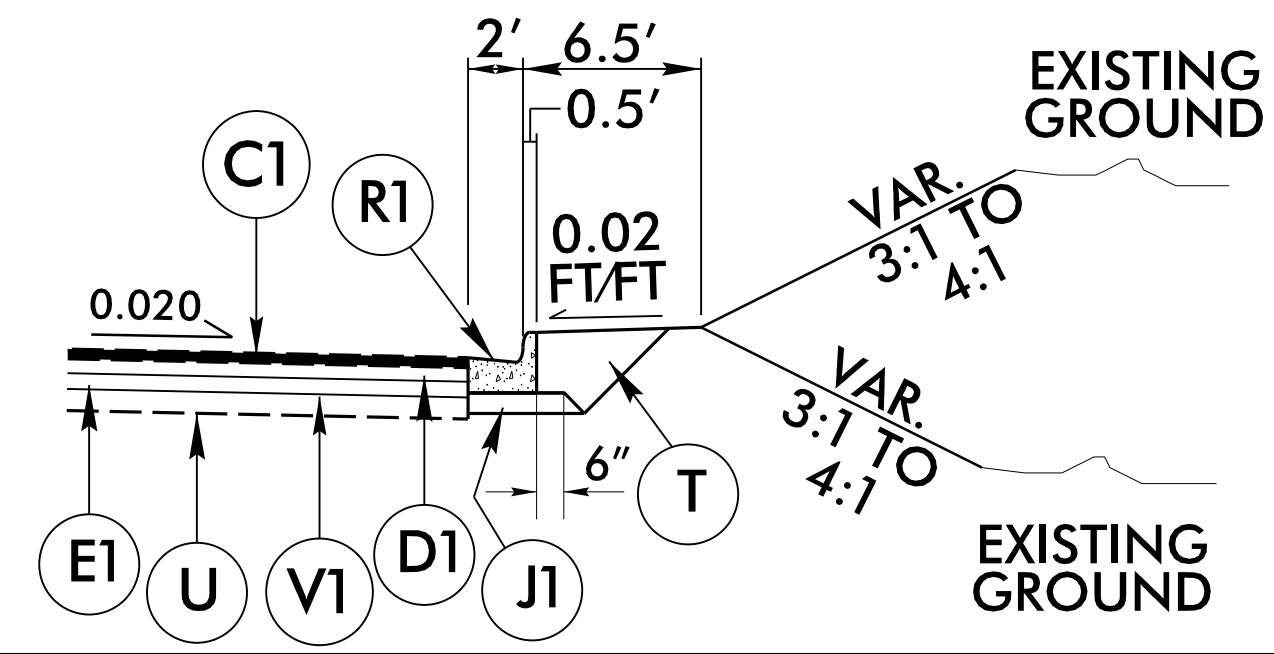
Sanitary Sewer Manhole	-----	⊕
Sanitary Sewer Cleanout	-----	⊕
U/G Sanitary Sewer Line	-----	SS
Above Ground Sanitary Sewer	-----	A/G Sanitary Sewer
SS Force Main Line Test Hole (SUE - LOS A)*	-----	⊕
SS Force Main Line (SUE - LOS B)*	-----	FSS
SS Force Main Line (SUE - LOS C)*	-----	FSS
SS Force Main Line (SUE - LOS D)*	-----	FSS

MISCELLANEOUS:

Utility Pole	-----	●
Utility Pole with Base	-----	□
Utility Located Object	-----	○
Utility Traffic Signal Box	-----	⊕
Utility Unknown U/G Line (SUE - LOS B)*	-----	UTL
U/G Tank; Water, Gas, Oil	-----	□
Underground Storage Tank, Approx. Loc.	-----	UST
A/G Tank; Water, Gas, Oil	-----	□
Geoenvironmental Boring	-----	⊕
Abandoned According to Utility Records	-----	AATUR
End of Information	-----	E.O.I.

8/17/99

PAVEMENT SCHEDULE	
(FINAL PAVEMENT DESIGN)	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J1	6" AGGREGATE BASE COURSE
R1	2'-6" CURB & GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	MILL 9.5" OF EXISTING ASPHALT PAVEMENT
V2	MILL 7" OF EXISTING ASPHALT PAVEMENT

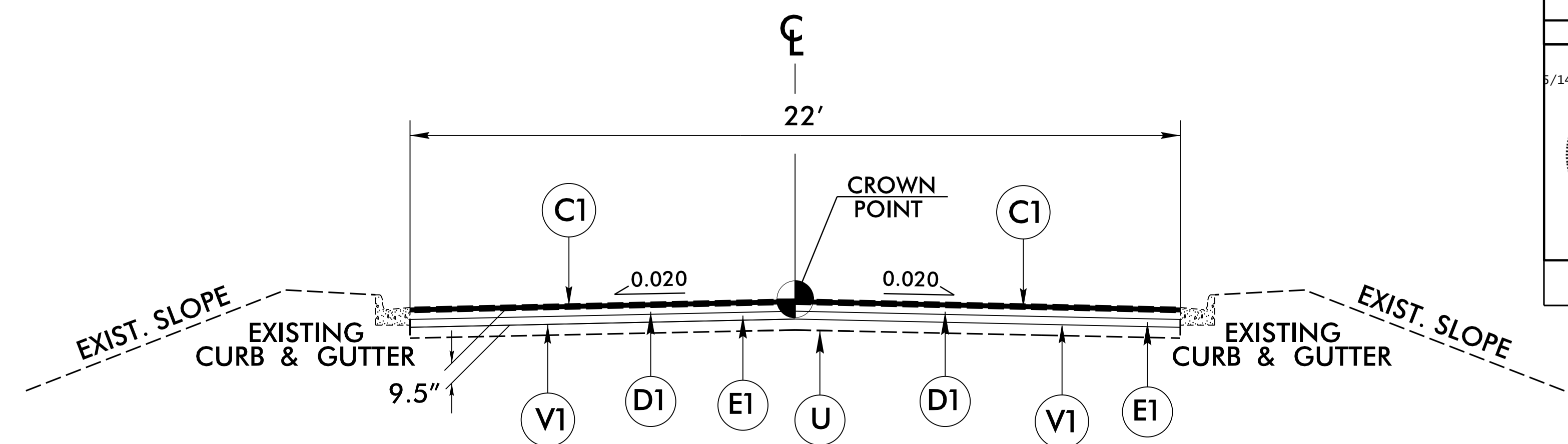


USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

-COLLINS- STA. 18+92.00 TO -COLLINS- STA. 19+72.44 RT.
 -COLLINS- STA. 20+62.00 RT.
 -COLLINS- STA. 12+22.00 TO -COLLINS- STA. 14+09.12 LT. (REVERSE)
 -COLLINS- STA. 15+41.00 TO -COLLINS- STA. 15+47.00 LT. (REVERSE)
 -COLLINS- STA. 20+17.00 TO -COLLINS- STA. 20+59.00 LT. (REVERSE)

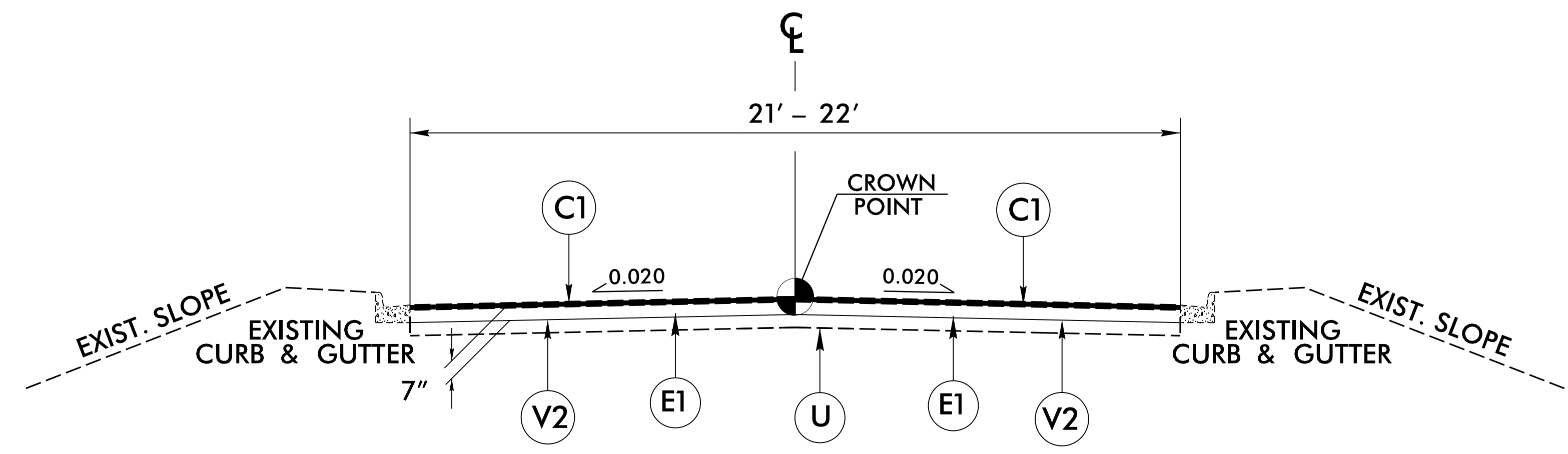
-OGDEN- STA. 11+78.00 TO -OGDEN- STA. 13+84.00 RT.
 -OGDEN- STA. 22+50.00 TO -OGDEN- STA. 23+22.10 RT.
 -OGDEN- STA. 11+54.00 TO -OGDEN- STA. 11+76.00 LT. (REVERSE)
 -OGDEN- STA. 14+98.00 TO -OGDEN- STA. 15+05.00 LT. (REVERSE)
 -OGDEN- STA. 21+95.00 TO -OGDEN- STA. 22+21.00 LT. (REVERSE)

* MATCH EXISTING SLOPES



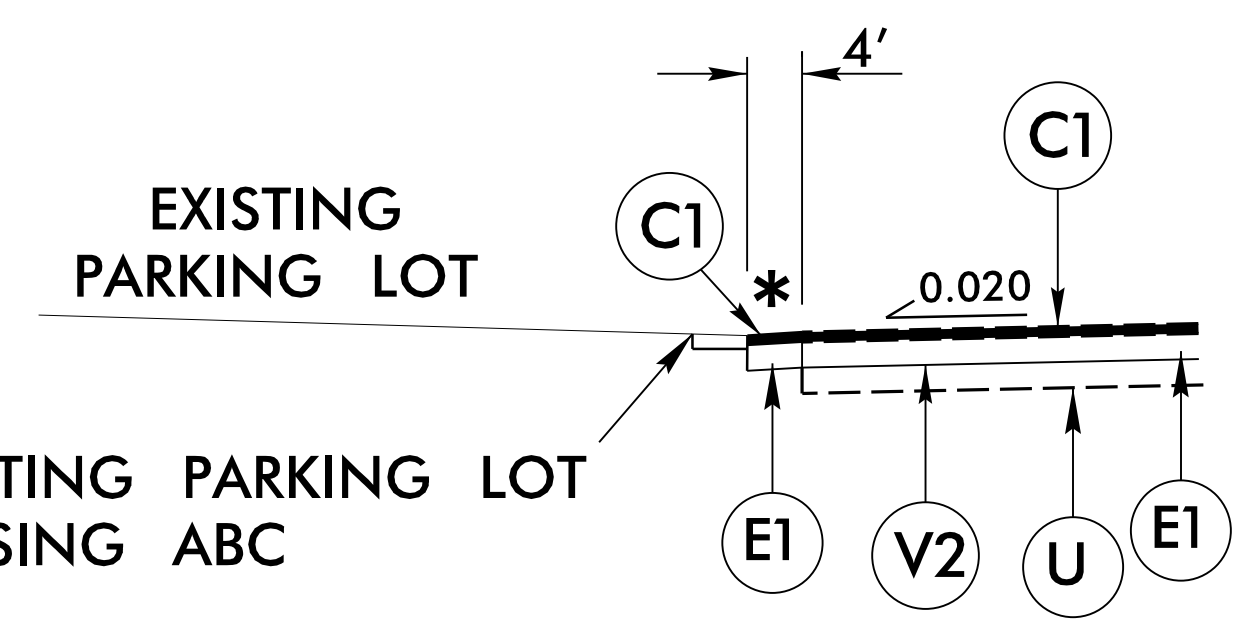
TYPICAL SECTION NO. 1

FROM -COLLINS- STA. 10+56.63 TO -EL- STA. 22+87.62
 FROM -OGDEN- STA. 10+58.20 TO -EL- STA. 23+22.10



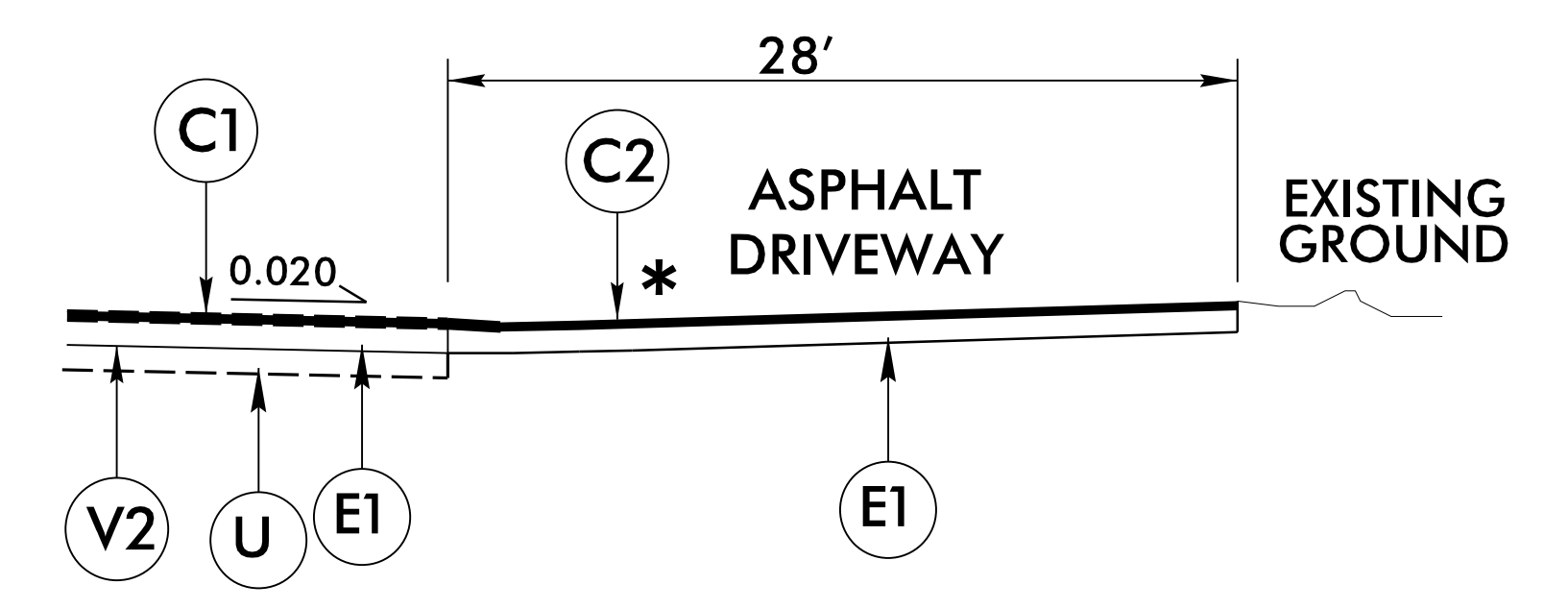
TYPICAL SECTION NO. 2

FROM -DUNHAM- STA. 10+57.63 TO -EL- STA. 17+75.56
 FROM -DEGLOPPER- STA. 10+11.00 TO -EL- STA. 15+11.07



TIE TO EXISTING PARKING LOT USING ABC

USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2
 -DEGLOPPER- STA. 11+00.00 TO -DEGLOPPER- STA. 14+81.00 LT.



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2
 -DEGLOPPER- STA. 14+56.00 RT.

PROJECT REFERENCE NO. 49218.9, 49218.15	SHEET NO. 2A-1
PAVEMENT DESIGN ENGINEER 5/14/2024 MUSAM SADIK	ROADWAY DESIGN ENGINEER 5/14/2024 MURPHY
SEAL 057261	SEAL 018981
Designed by: Husam Sadik	Designed by: R. K. Murphy
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REVISIONS

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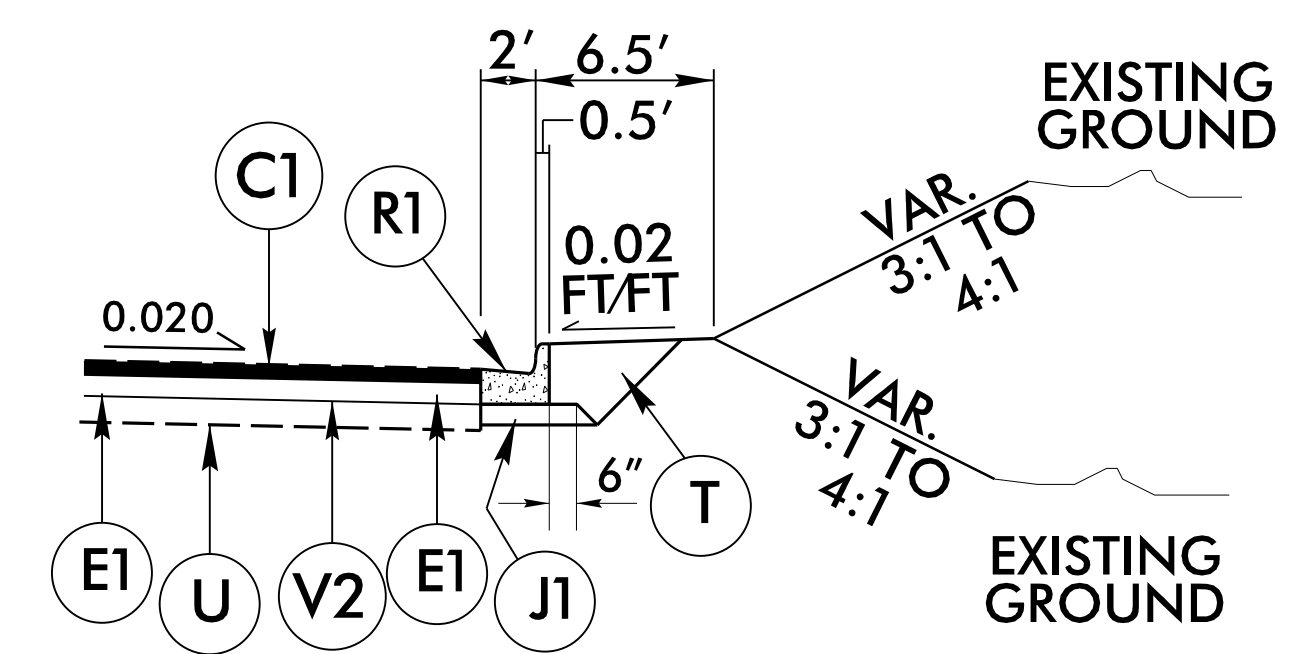
PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
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REVISIONS

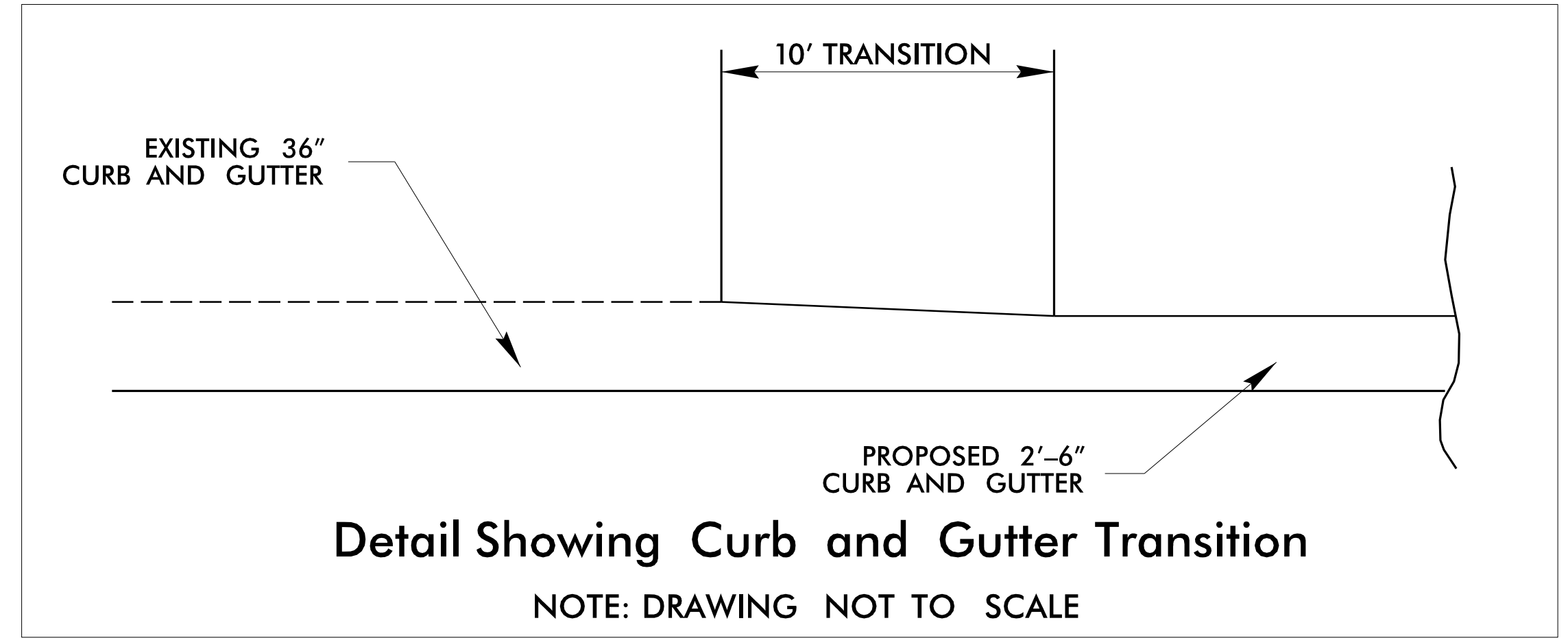
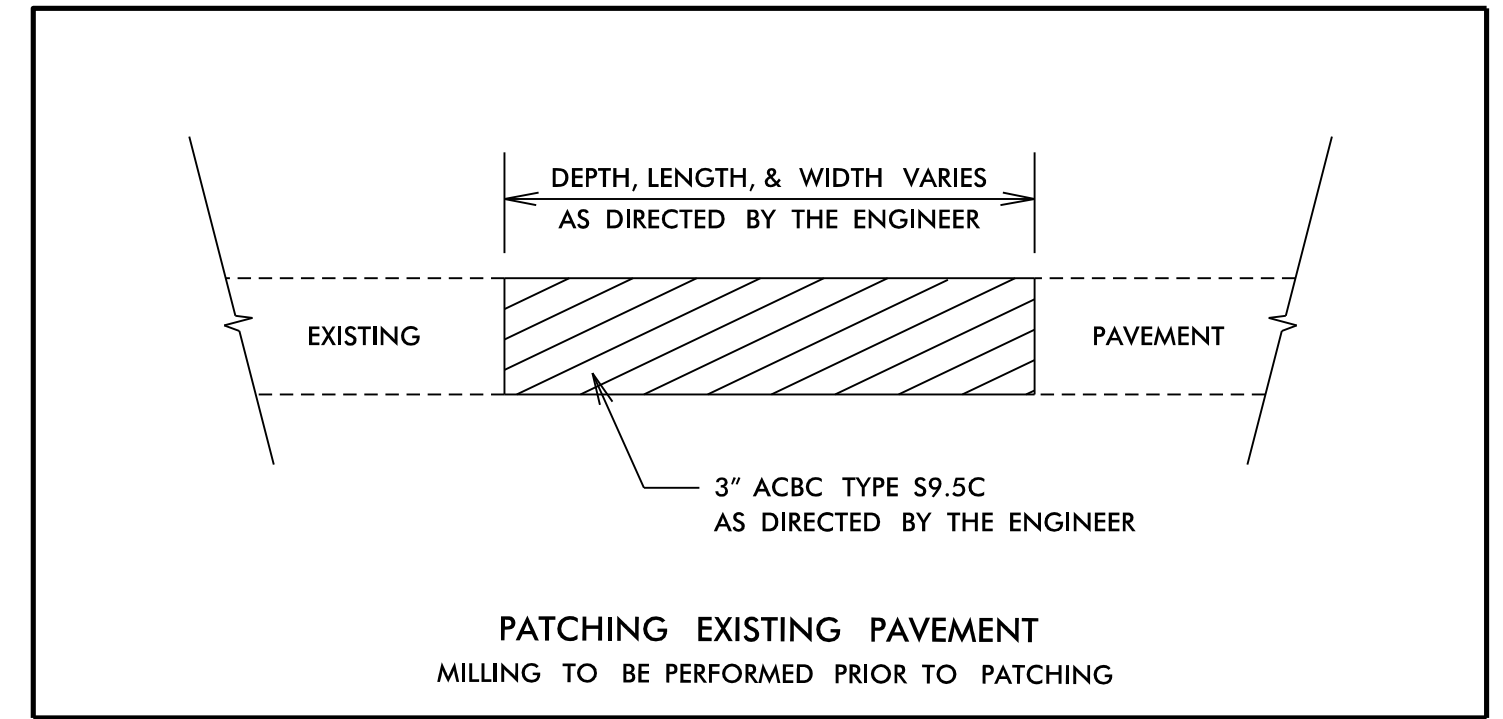
PROJECT REFERENCE NO. 49218.9, 49218.15	SHEET NO. 2A-2
5/29/2024	ROADWAY DESIGN 5/29/2024
Designed by: Husam Sadik	Designed by: P.K. Murphy
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2

-DUNHAM- STA. 14+08.00 TO -DUNHAM- STA. 14+95.00 RT.
-DUNHAM- STA. 16+13.71 TO -DUNHAM- STA. 17+06.00 RT.

-DEGLOPPER- STA. 10+46.00 TO -DEGLOPPER- STA. 12+82.52 RT.



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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

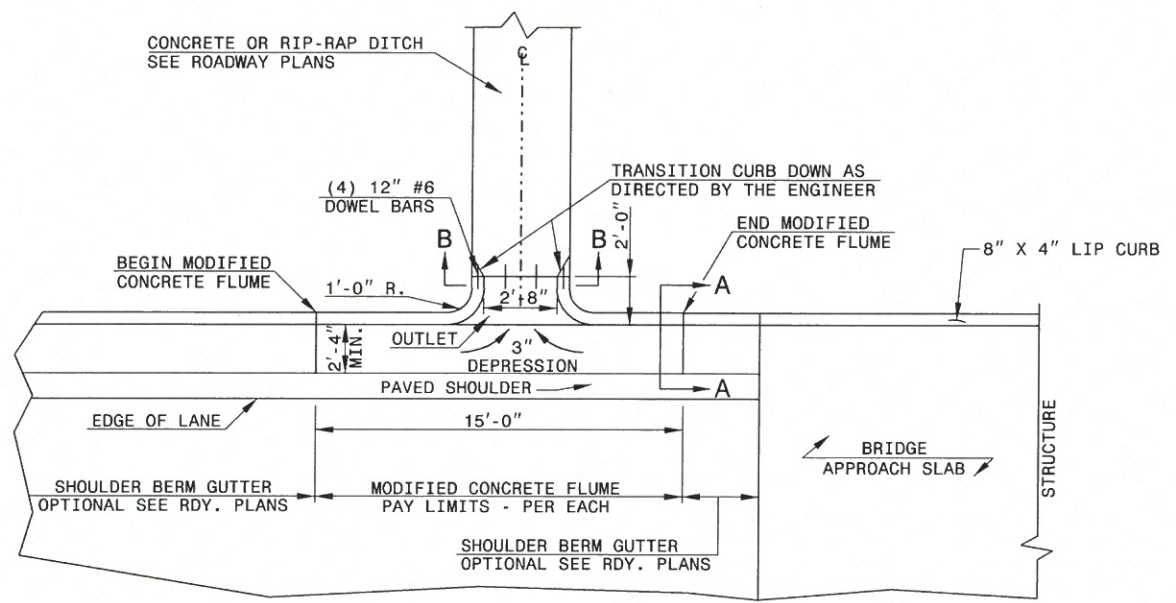
ENGLISH DETAIL DRAWING FOR
MODIFIED CONCRETE FLUME
WITH CONCRETE OR RIP-RAP DITCH

SHEET 1 OF 1
MODFLMDTCH

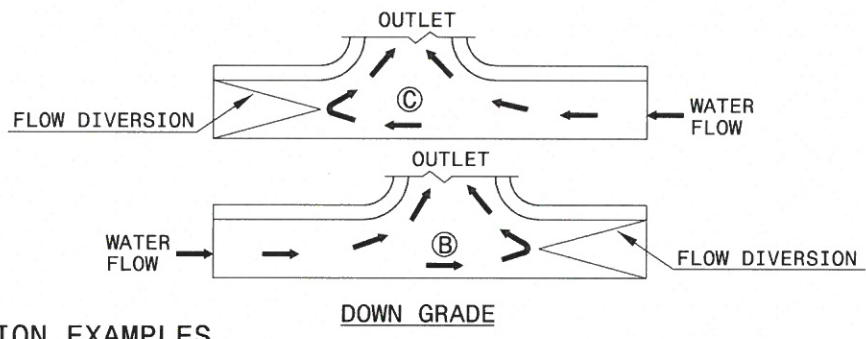
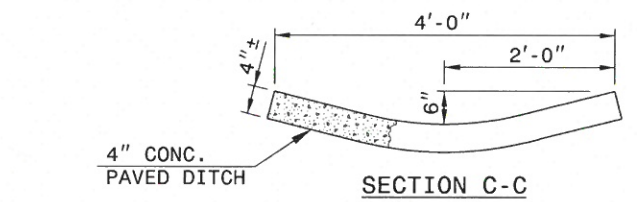
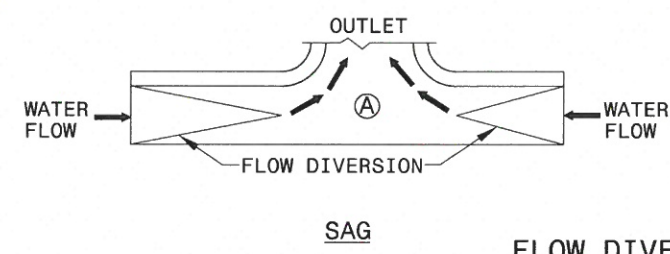
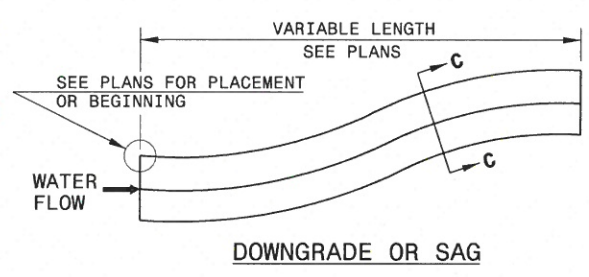
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MODIFIED CONCRETE FLUME
WITH CONCRETE OR RIP-RAP DITCH

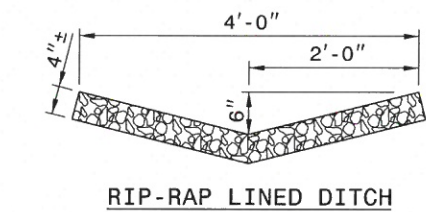
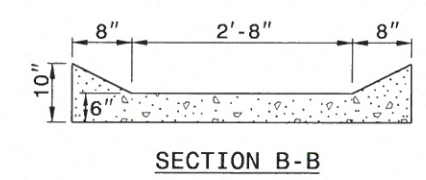
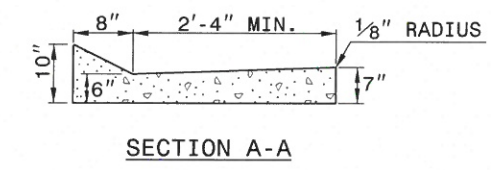
SHEET 1 OF 1
MODFLMDTCH



PLAN VIEW



FLOW DIVERSION EXAMPLES



NOTES:

- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
- CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
- CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
- CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
- MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

I:\B-001-2017\14417\Contractors\Standards\Stand\modiflume.dgn



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: E.E. Ward DATE: Apr. 2002
MODIFIED BY: J.S. Howerton DATE: October 2017
CHECKED BY: DATE:
FILE SPEC.: w:\details\stand\modiflume.dgn

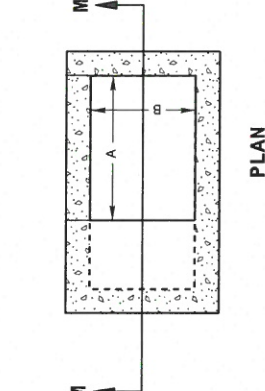
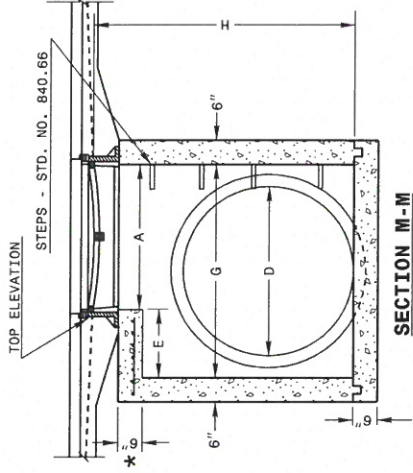
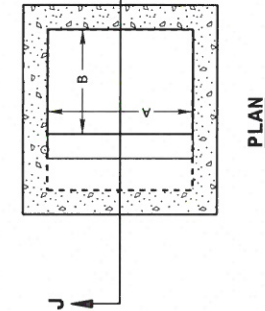
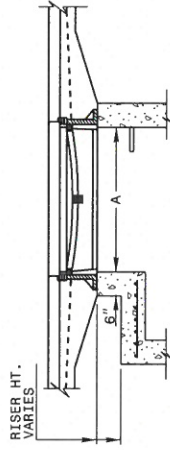
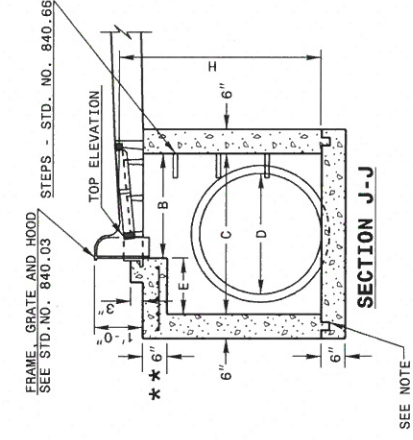
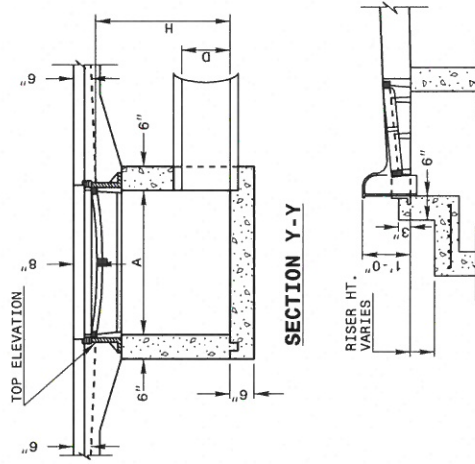
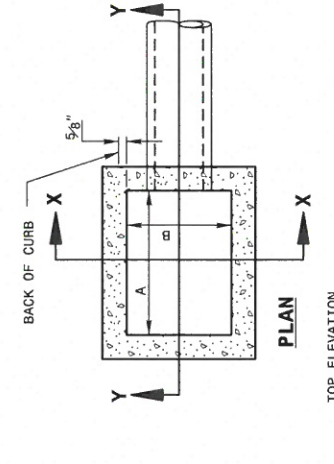
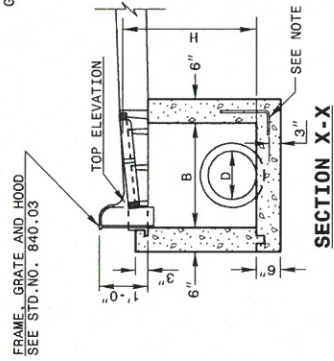
STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

SHEET 1 OF 2
840D02

GENERAL NOTES:

- USE CLASS "B" CONCRETE THROUGHOUT.
- PROVIDE ALL CATCH BASINS OVER 9'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
- OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
- IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
- USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
- FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
- CONSTRUCT WITH PIPE CROWNS MATCHING.
- CHAMFER ALL EXPOSED CORNERS 1".
- ** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.



STATE OF
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 RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

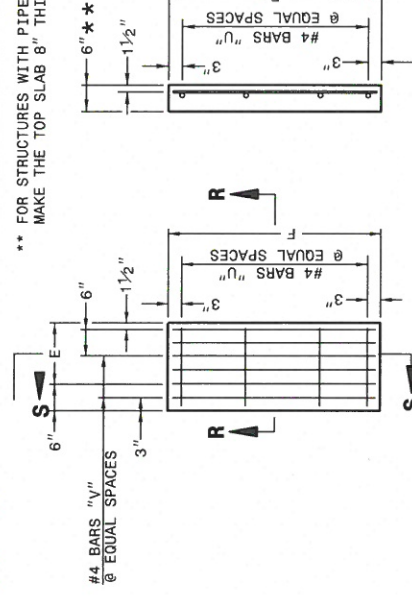
SHEET 1 OF 2
840D02

STATE OF
 NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

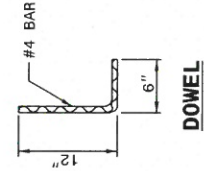
ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
 12" THRU 84" PIPE

SHEET 2 OF 2
840D02

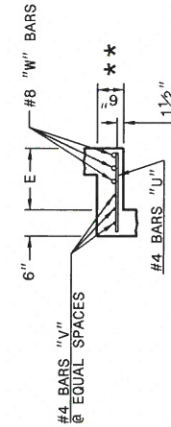
** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.



SECTION S-S

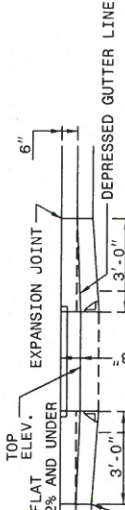
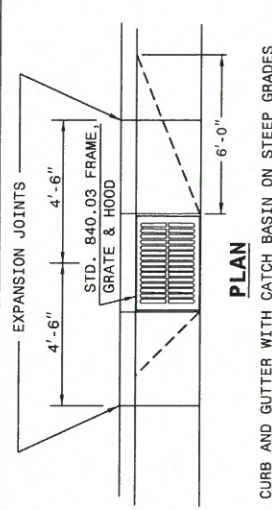


SECTION R-R



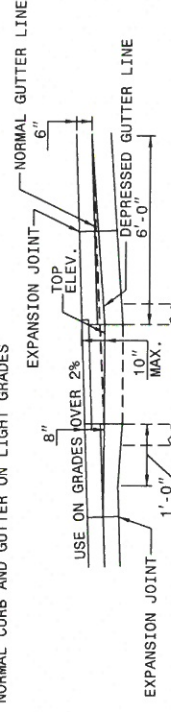
* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

PIPE	DIMENSIONS OF BOX AND PIPE			MIN. HEIGHT	COVER DIMENSION	BARS-U			BARS-V			BARS-W			TOTAL LBS.	CU YDS. CONC. IN BOX FOR MINIMUM HEIGHT, H, WITH NO RISER *	DEDUCTIONS ONE PIPE		
	SPAN	WIDTH	DEPTH			E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOP SLAB			BOTTOM SLAB	C.M.	R.C.
12"	3'-0"	2'-2"	2'-0"	2'-3"	2'-6"	---	---	---	---	---	---	---	---	---	0.235	0.772	0.015	0.026	
15"	3'-0"	2'-2"	2'-6"	2'-3"	2'-6"	---	---	---	---	---	---	---	---	---	0.235	0.829	0.023	0.036	
18"	3'-0"	2'-2"	3'-1"	2'-3"	2'-6"	---	---	---	---	---	---	---	---	---	0.235	0.887	0.033	0.049	
24"	3'-0"	2'-2"	3'-4"	3'-10"	4'-4"	4	1'-5"	2	4'-1"	3	4'-1"	3	4'-1"	39	0.123	0.347	1.001	0.059	
30"	3'-0"	2'-2"	3'-10"	4'-6"	4'-10"	4	1'-11"	3	4'-7"	3	4'-7"	43	0.181	0.432	1.714	0.132	0.178		
36"	3'-0"	2'-2"	4'-5"	4'-11"	5'-5"	5	2'-5"	4	5'-2"	3	5'-2"	3	5'-2"	47	0.200	0.543	1.738	0.180	0.243
42"	3'-0"	2'-2"	5'-0"	5'-6"	6'-0"	5	3'-1"	4	5'-9"	3	5'-9"	3	5'-9"	51	0.289	0.667	2.052	0.235	0.317
48"	3'-0"	2'-2"	5'-7"	6'-0"	6'-7"	6	3'-8"	5	6'-4"	3	6'-4"	3	6'-4"	56	0.289	0.802	2.387	0.297	0.401
54"	3'-0"	2'-2"	6'-3"	6'-6"	7'-3"	6	4'-4"	5	7'-0"	3	7'-0"	3	7'-0"	61	0.340	0.973	2.722	0.363	0.546
60"	3'-0"	2'-2"	6'-11"	7'-0"	7'-11"	7	5'-0"	6	8'-3"	3	8'-3"	3	8'-3"	72	0.442	1.340	3.392	0.524	0.774
72"	3'-0"	2'-2"	7'-6"	8'-0"	8'-6"	7	5'-9"	7	9'-1"	3	9'-1"	3	9'-1"	84	0.483	1.530	3.727	0.615	0.893
84"	3'-0"	2'-2"	8'-9"	8'-6"	9'-9"	8	6'-7"	8	10'-9"	3	10'-9"	3	10'-9"	84	0.544	1.760	4.062	0.713	1.010



ELEVATION

NORMAL CURB AND GUTTER ON LIGHT GRADES



ELEVATION

NORMAL CURB AND GUTTER ON STEEP GRADES

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CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 Std.840.01 DATE: _____
 MODIFIED BY: E.E. WARD DATE: 3-1-02
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: s:Special Details/jhowerton/840d02.dgn



SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH		4400000000-E		4405000000-E		4410000000-E		4420000000-N		4430000000-N		4445000000-E		4455000000-N		4685000000-E		4709000000-E		4900000000-N		
								MI	FT	SF	SF	SF	EA	EA	LF	DAY	LF	LF	LF	EA	EA	EA	EA							
49218.9	Cumberland	1	COLLINS ST.	FROM BUTNER RD. TO PRATT ST	1	2	2WU	0.233	22	60	30	45	1	12	20	5														
TOTAL FOR PROJ NO. 49218.9										60	30	45	1	12	20	5.00							2,370	22	30					
49218.15	Cumberland	2	DUNHAM ST.	FROM BUTNER RD. TO DEAD END	2	2	2WU	0.136	22	100	27	45		12	20	10														
49218.15	Cumberland	3	EAST DEGLOPPER ST.	FROM DUNHAM ST. TO OGDEN ST.	2	2	2WU	0.239	21	100	27	45		12	20	10		720.00												
49218.15	Cumberland	4	OGDEN ST.	FROM BUTNER RD. TO PRATT ST	1	2	2WU	0.099	22	100	26	45	1	14	20	10														
TOTAL FOR PROJ NO. 49218.15										300	80	135	1	38	60	30.00		720.00				4,968	55	63						
GRAND TOTAL										360	110	180	2	50	80	35		720				8,058	77	93						

REVISIONS

49218.9, 49218.15

FORT LIBERTY RESURFACING

WEI-6/P/263

COMPUTED BY: Katie Estep DATE: 5/23/2024
CHECKED BY: Kevin Alford DATE: 5/23/2024

PROJECT NO. 49218.9,49218.15 SHEET NO. 3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

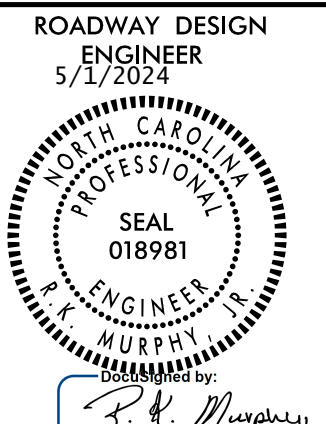
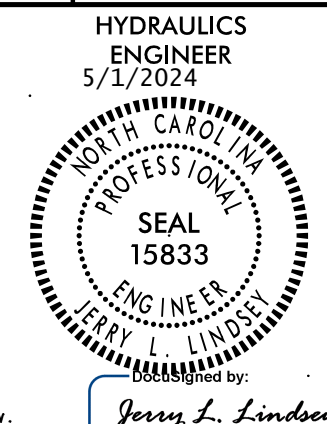
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

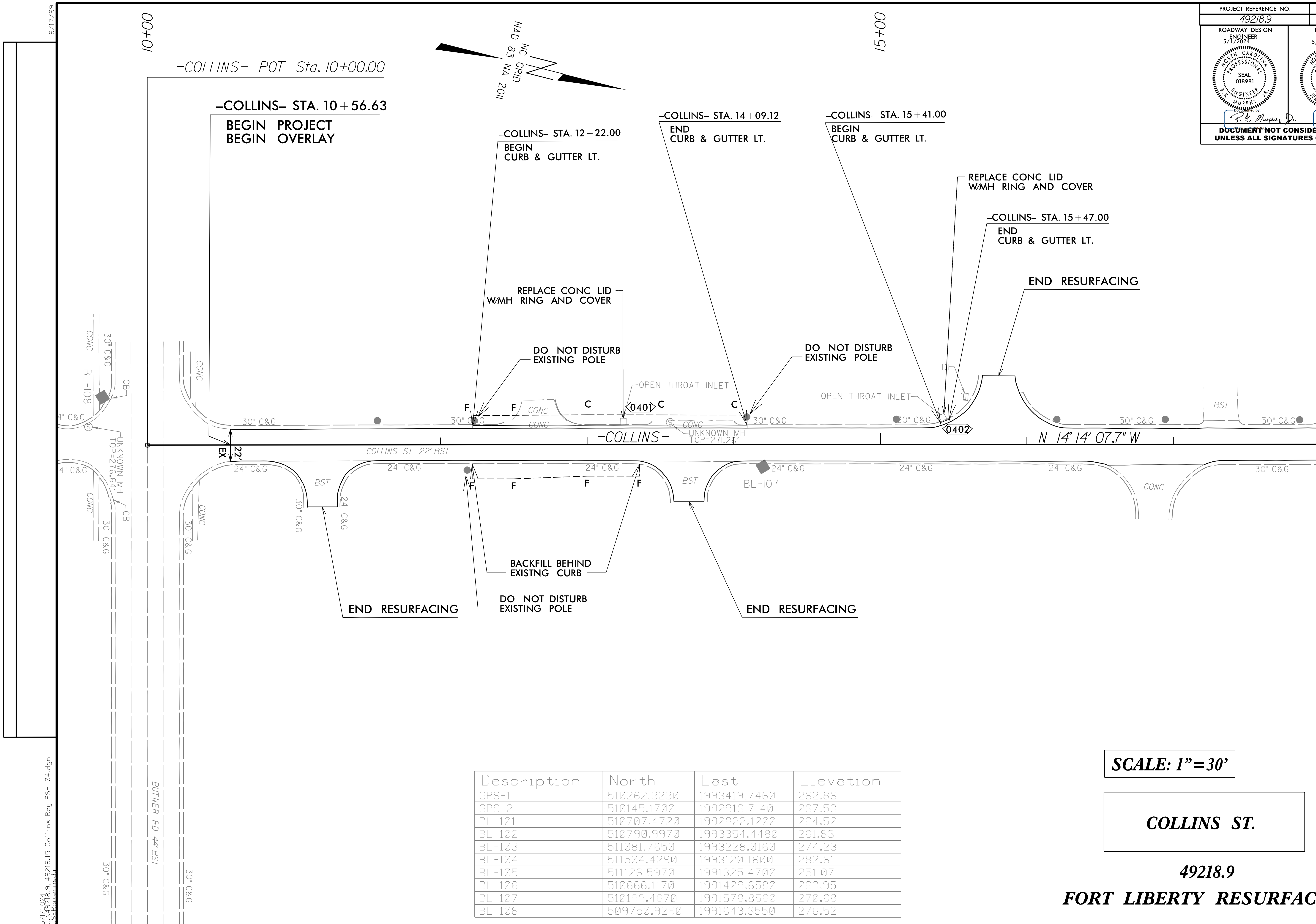
Main data table with columns for LINE & STATION, OFFSET, STRUCTURE NUMBER, R. C. PIPE CLASS III/IV, QUANTITIES FOR DRAINAGE STRUCTURES, FRAME, GRATES, AND HOOD, CONCRETE TRANSITIONAL SECTION, and REMARKS. Includes sub-tables for R. C. PIPE CLASS III, R. C. PIPE CLASS IV, and QUANTITIES FOR DRAINAGE STRUCTURES.

SHEET TOTALS and PROJECT TOTALS summary rows at the bottom of the table.

ABBREVIATIONS table listing various materials and components like CORRUGATED ALUMINIUM ALLOY, CATCH BASIN, CORRUGATED STEEL, etc.

REMARKS

PROJECT REFERENCE NO. 49218.9	SHEET NO. 4
ROADWAY DESIGN ENGINEER 5/1/2024 	HYDRAULICS ENGINEER 5/1/2024 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE SHEET 5
STA. 18 + 00.00


Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

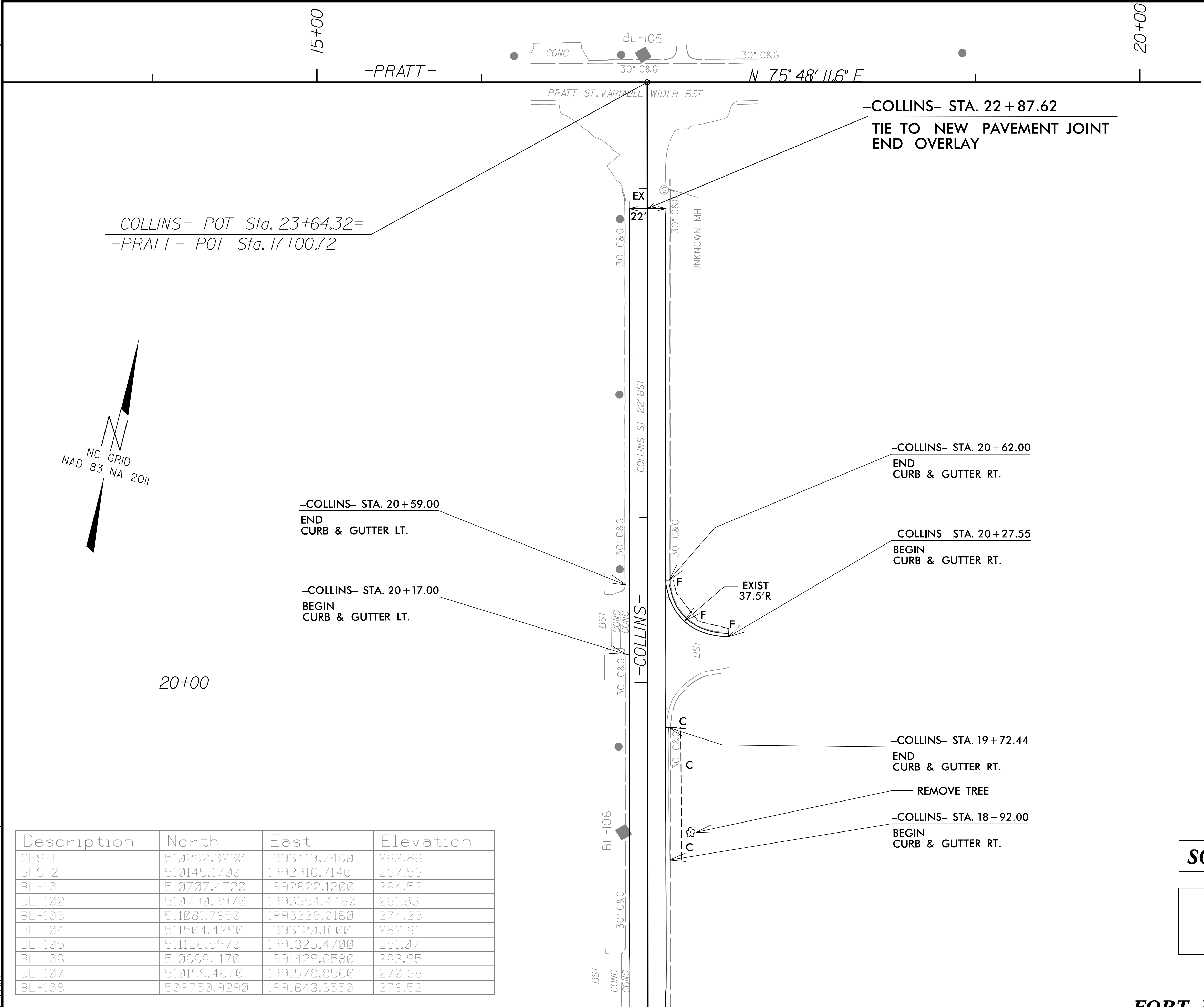
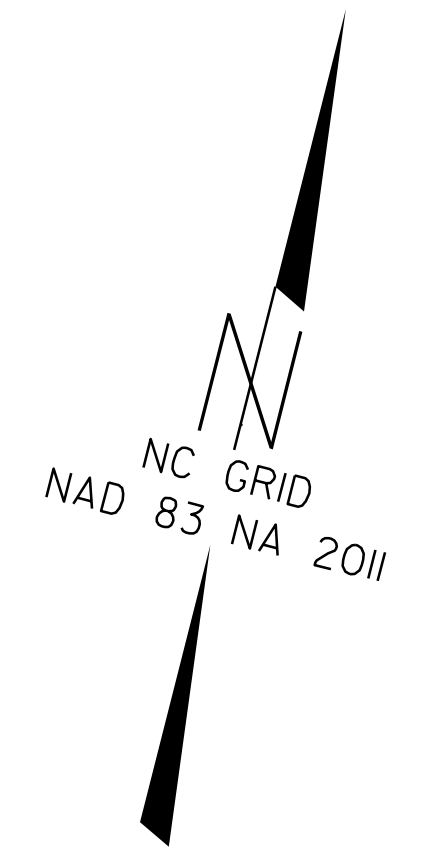
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COLLINS ST.

**49218.9
FORT LIBERTY RESURFACING**

5/1/2024 9:49:21 AM 49218.9_Collins_Resurfacing_PSH_04.dgn
11:55:11 AM 11/15/2024

PROJECT REFERENCE NO. 49218.9	SHEET NO. 5
ROADWAY DESIGN ENGINEER 5/1/2024	HYDRAULICS ENGINEER
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-COLLINS- POT Sta. 23+64.32=
-PRATT- POT Sta. 17+00.72

-COLLINS- STA. 20+59.00
END CURB & GUTTER LT.

-COLLINS- STA. 20+17.00
BEGIN CURB & GUTTER LT.

-COLLINS- STA. 20+62.00
END CURB & GUTTER RT.

-COLLINS- STA. 20+27.55
BEGIN CURB & GUTTER RT.

-COLLINS- STA. 19+72.44
END CURB & GUTTER RT.

-COLLINS- STA. 18+92.00
BEGIN CURB & GUTTER RT.

Description	North	East	Elevation
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GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

SCALE: 1" = 30'


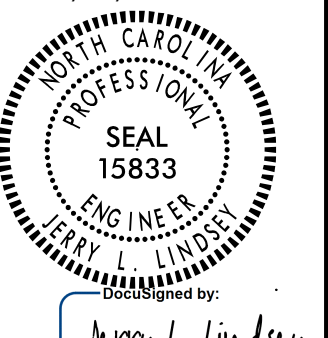
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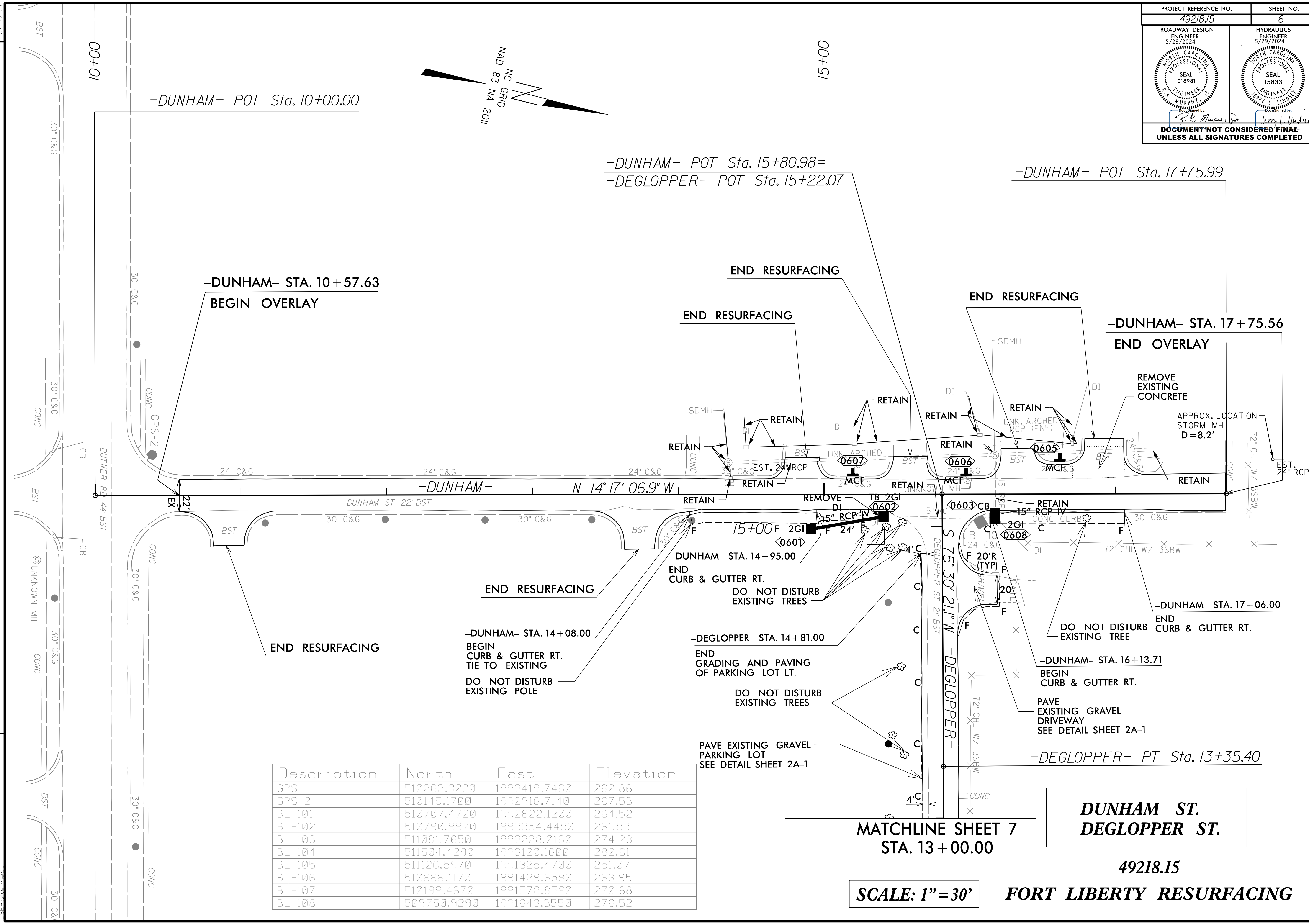
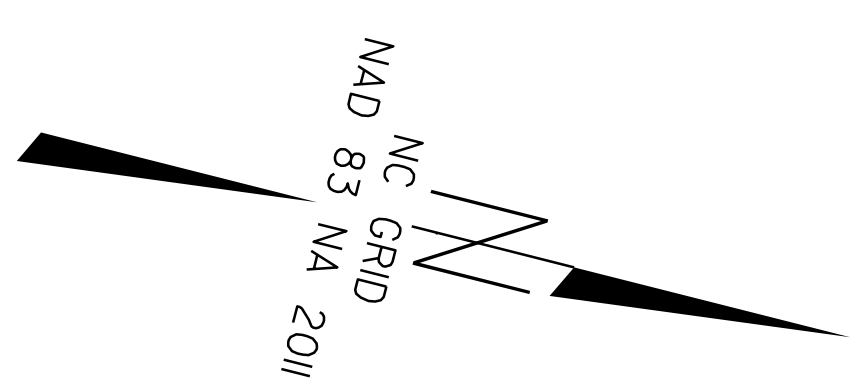
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FORT LIBERTY RESURFACING

MATCHLINE SHEET 4 STA. 18+00.00

8/17/99
 5/1/2024
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PROJECT REFERENCE NO. 49218.15	SHEET NO. 6
ROADWAY DESIGN ENGINEER 5/29/2024 	HYDRAULICS ENGINEER 5/29/2024 
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



Description	North	East	Elevation
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GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

**MATCHLINE SHEET 7
STA. 13+00.00**

**DUNHAM ST.
DEGLOPPER ST.**

49218.15

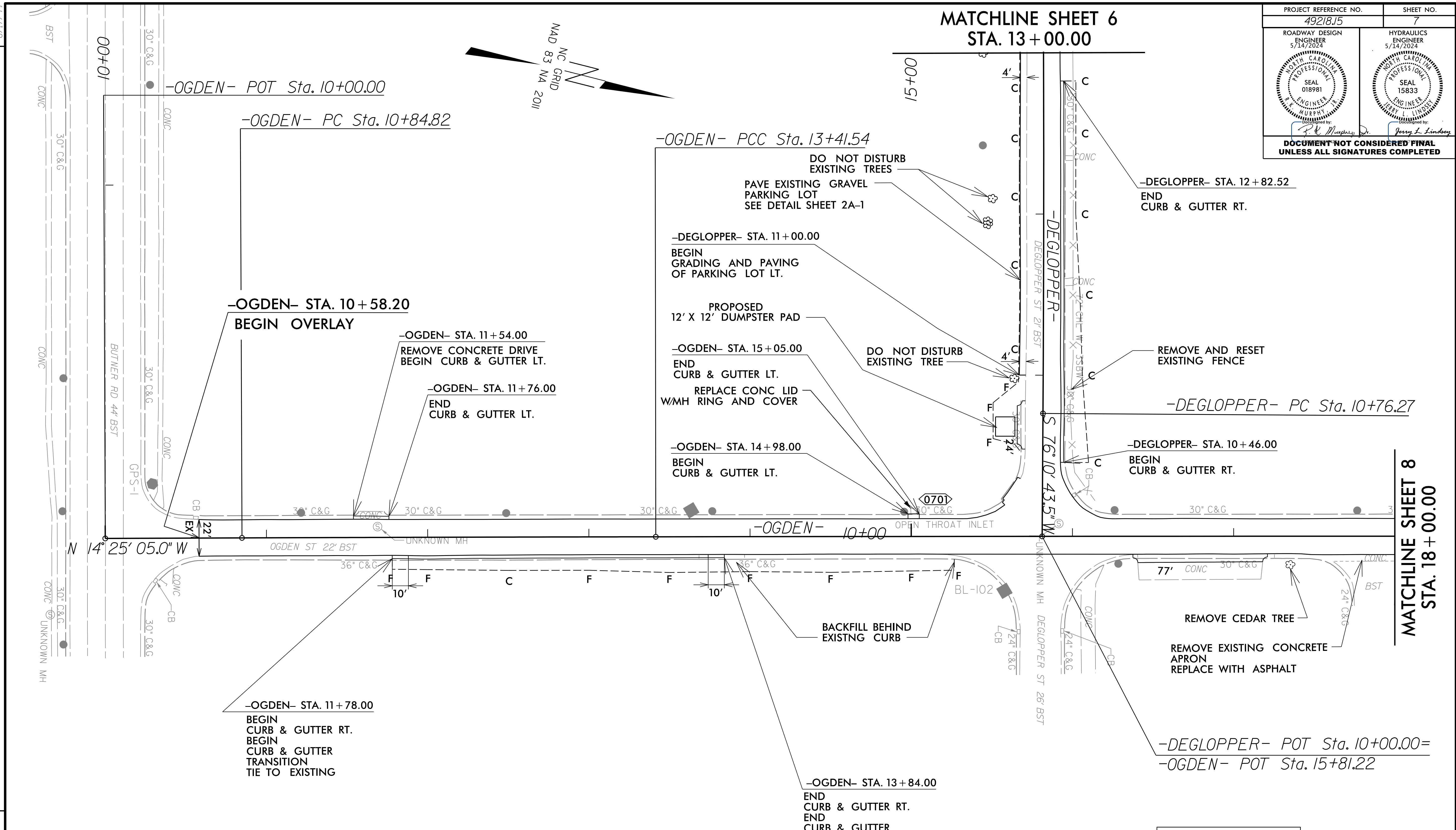
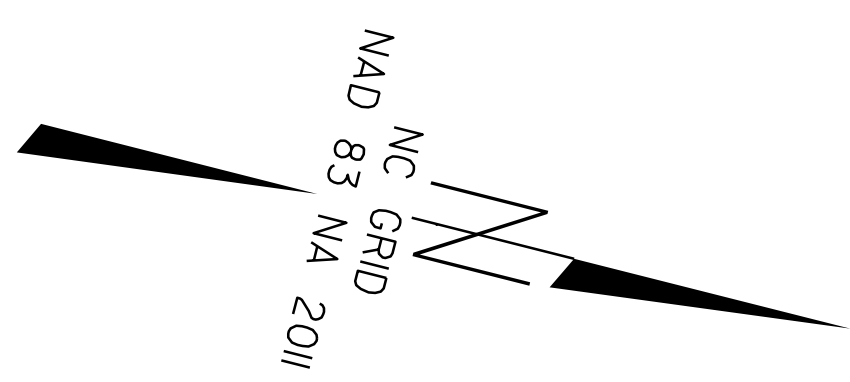
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FORT LIBERTY RESURFACING

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MATCHLINE SHEET 6
STA. 13+00.00

PROJECT REFERENCE NO. 49218.15	SHEET NO. 7
ROADWAY DESIGN ENGINEER 5/14/2024 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 018981 MURPHY JERRY L. MURPHY, JR.	HYDRAULICS ENGINEER 5/14/2024 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15833 LINDSEY JERRY L. LINDSEY
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

-OGDEN-
 PI Sta 12+13.18
 $\Delta = 0^\circ 08' 14.2''$ (RT)
 $D = 0^\circ 03' 12.5''$
 $L = 256.72'$
 $T = 128.36'$
 $R = 107,147.40'$

-DEGLOPPER-
 PI Sta 12+05.84
 $\Delta = 0^\circ 40' 22.4''$ (LT)
 $D = 0^\circ 15' 34.8''$
 $L = 259.13'$
 $T = 129.57'$
 $R = 22,065.00'$

-DEGLOPPER-
 PI Sta 16+41.78
 $\Delta = 0^\circ 05' 47.3''$ (RT)
 $D = 0^\circ 00' 57.8''$
 $L = 600.48'$
 $T = 300.24'$
 $R = 356,606.18'$

SCALE: 1" = 30'

DEGLOPPER ST.
OGDEN ST.

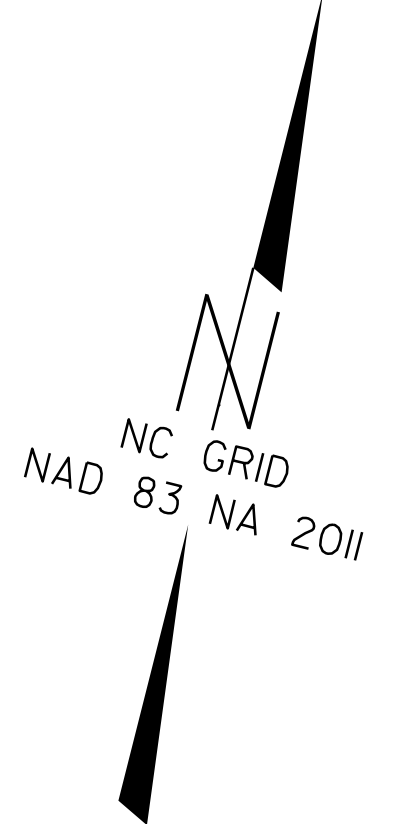
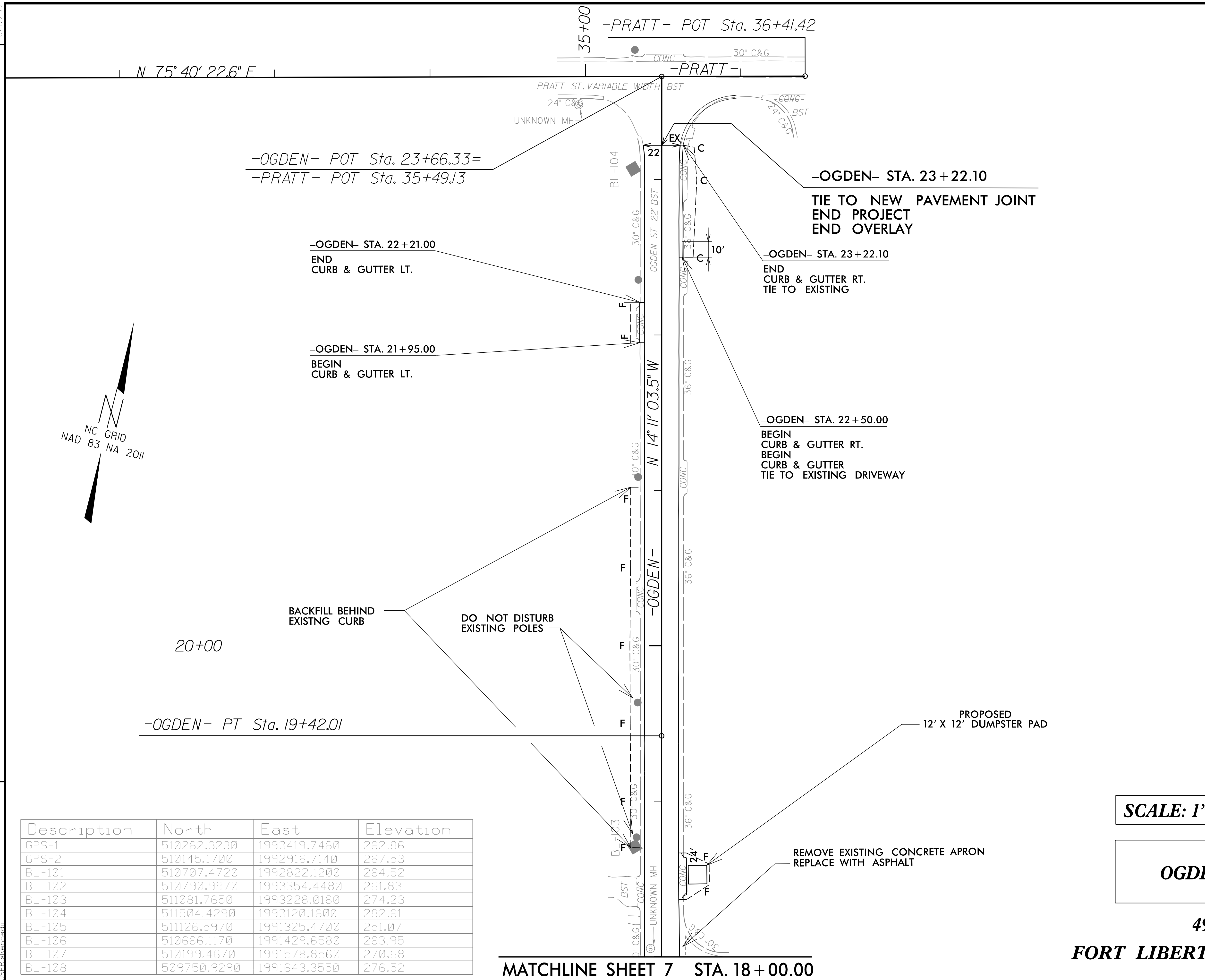
49218.15

FORT LIBERTY RESURFACING

5/13/2024 49218.15_Collins_Rdy_PSH_07.dgn

MATCHLINE SHEET 8
STA. 18+00.00

PROJECT REFERENCE NO. 49218.15	SHEET NO. 8
ROADWAY DESIGN ENGINEER 5/1/2024	HYDRAULICS ENGINEER
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>	



Description	North	East	Elevation
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GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

SCALE: 1" = 30'


OGDEN ST.

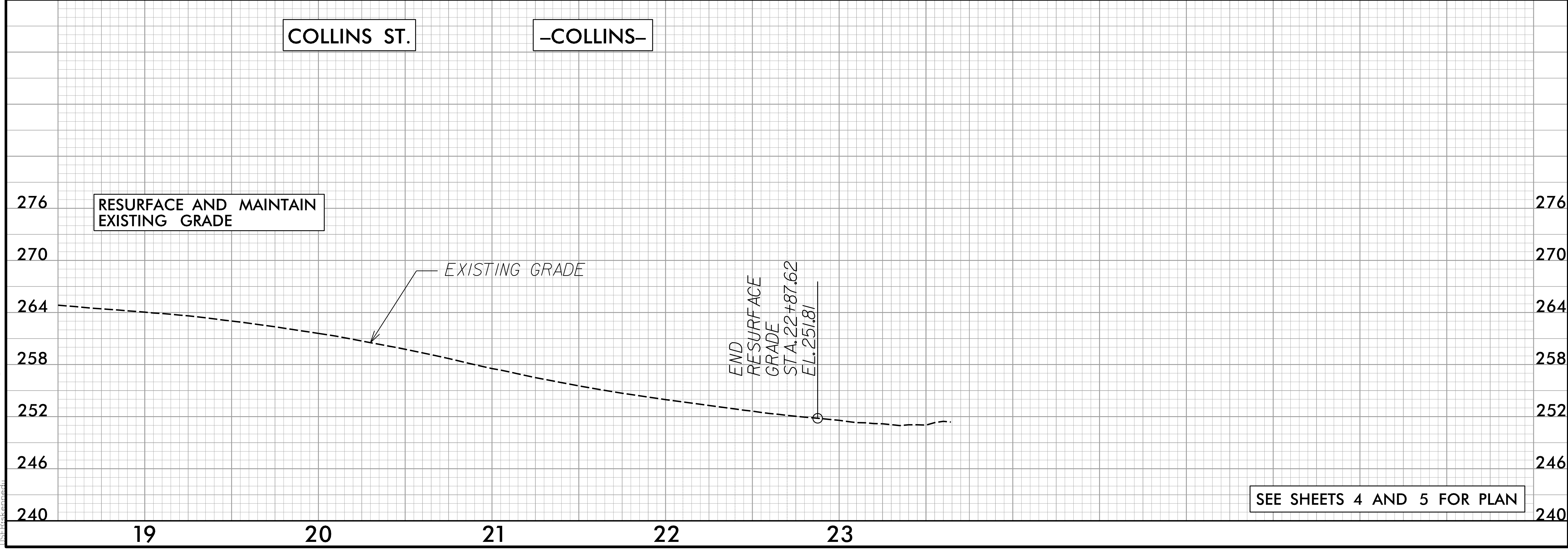
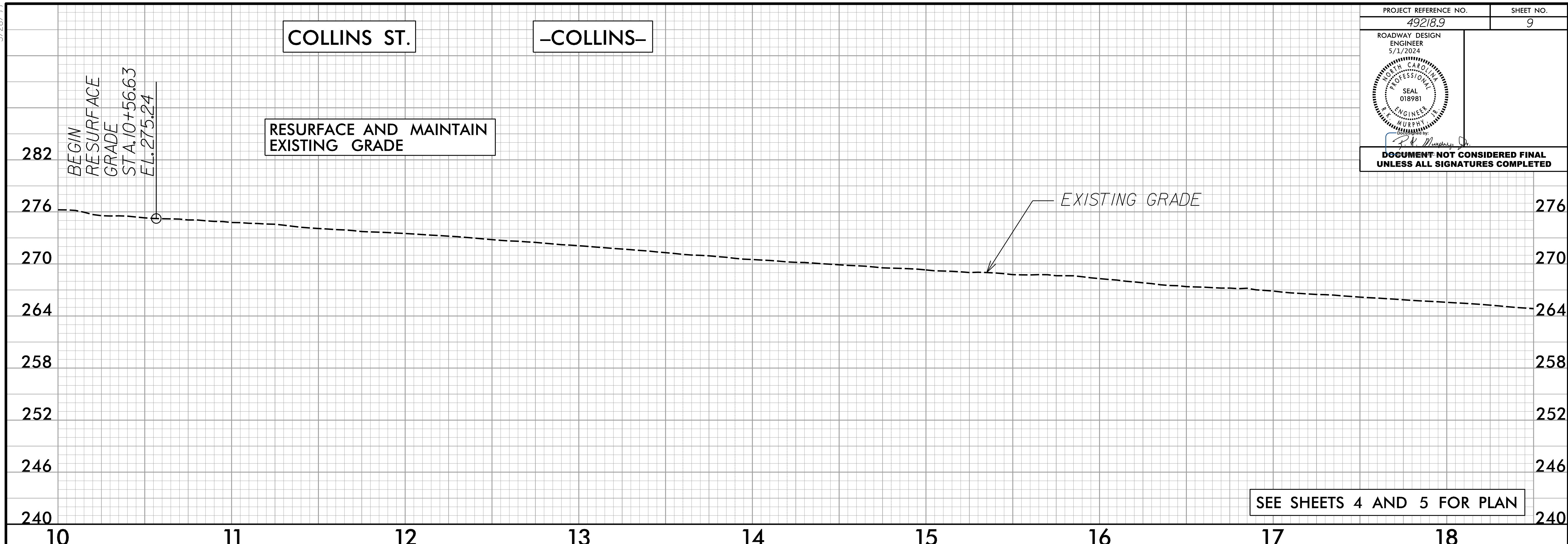
**49218.15
FORT LIBERTY RESURFACING**

MATCHLINE SHEET 7 STA. 18+00.00

5/1/2024 9:49:21 AM 49218.15_Collins_Rdy_PSH_08.dgn

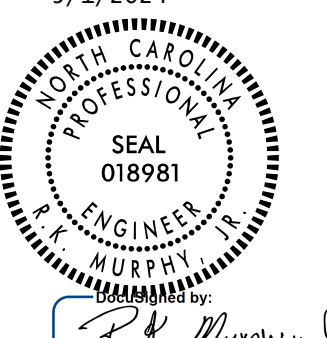
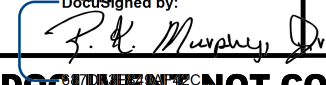
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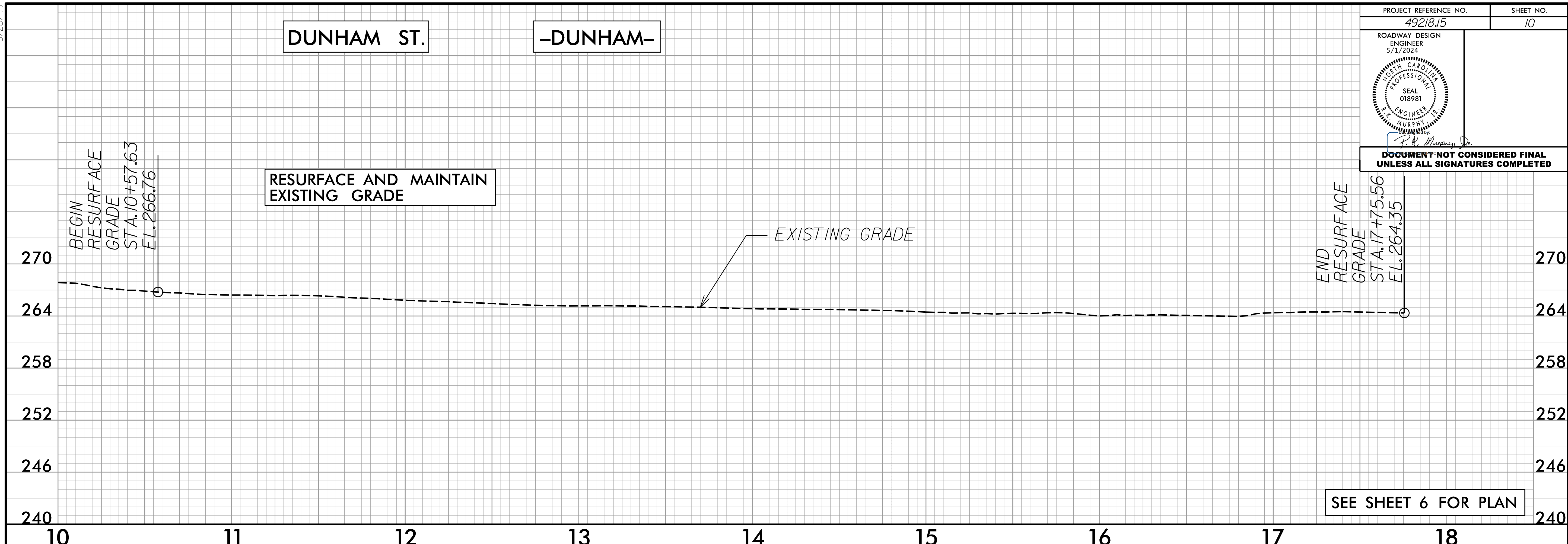
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ROADWAY DESIGN ENGINEER 5/1/2024	
	
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5/28/99

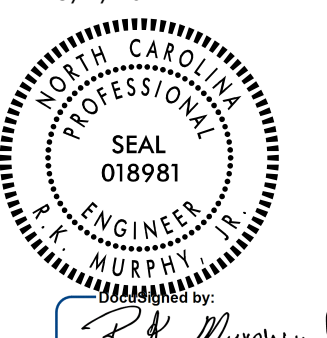
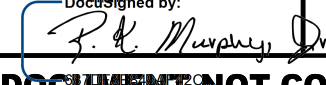
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ROADWAY DESIGN ENGINEER 5/1/2024	
	
	
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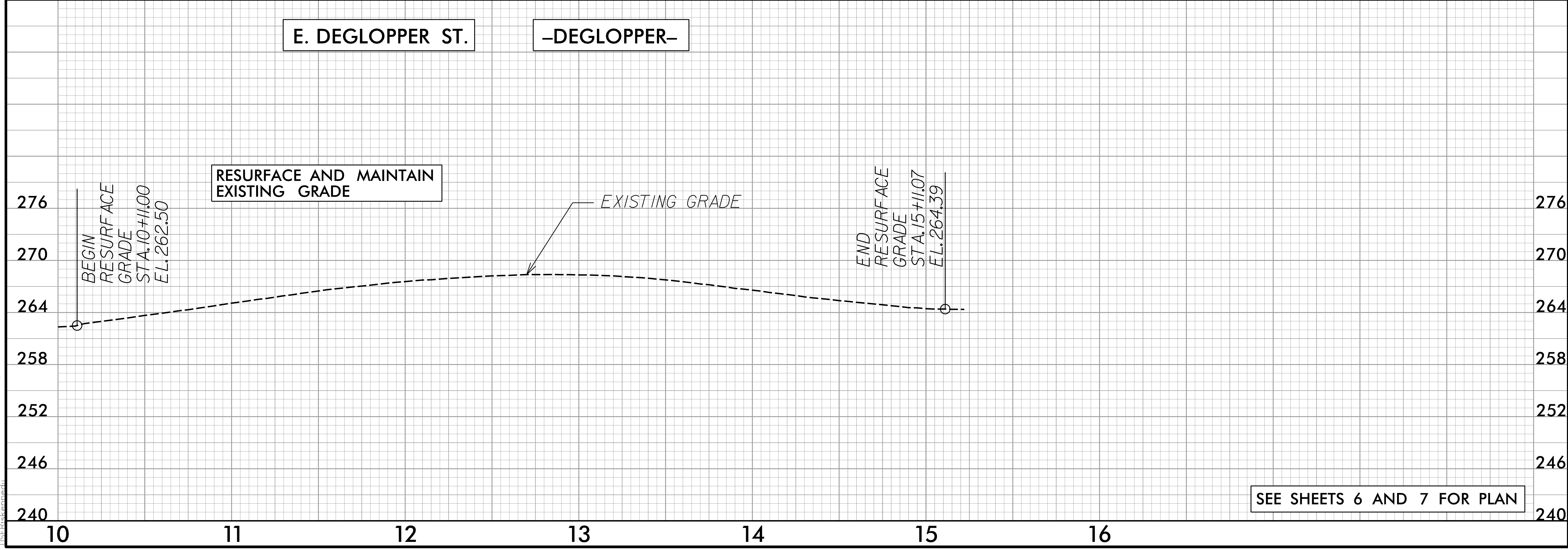
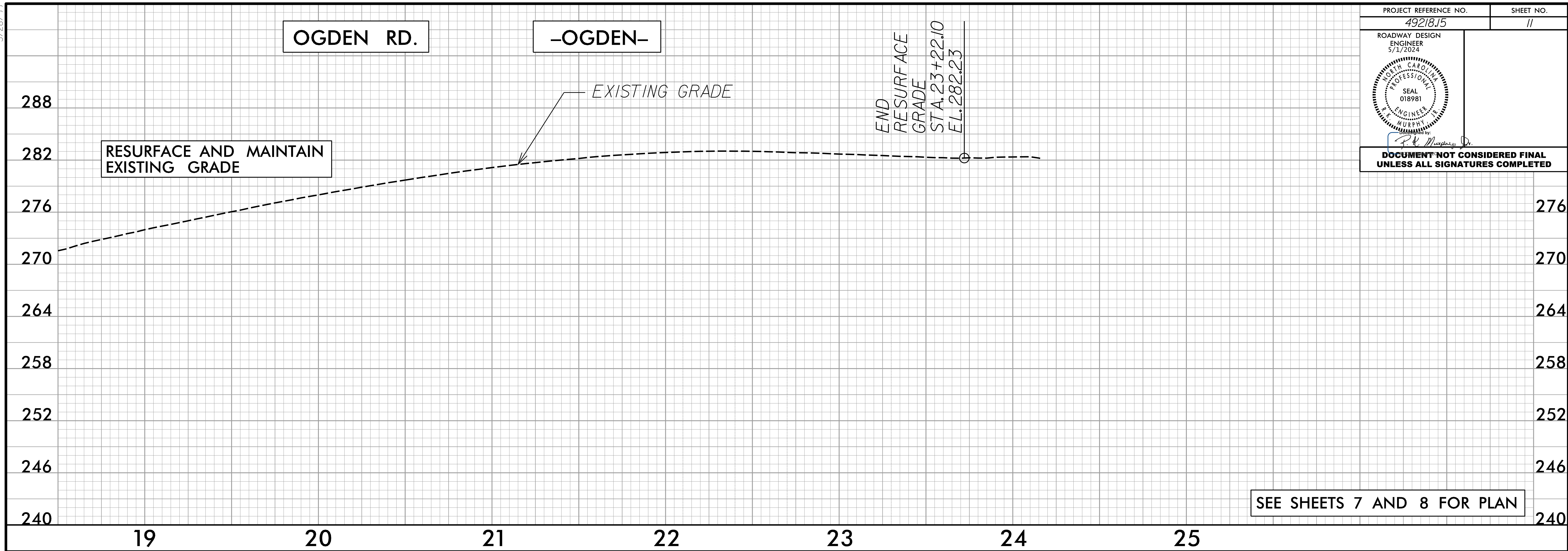


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5/28/99

PROJECT REFERENCE NO. 49218.15	SHEET NO. 11
ROADWAY DESIGN ENGINEER 5/1/2024	
	
	
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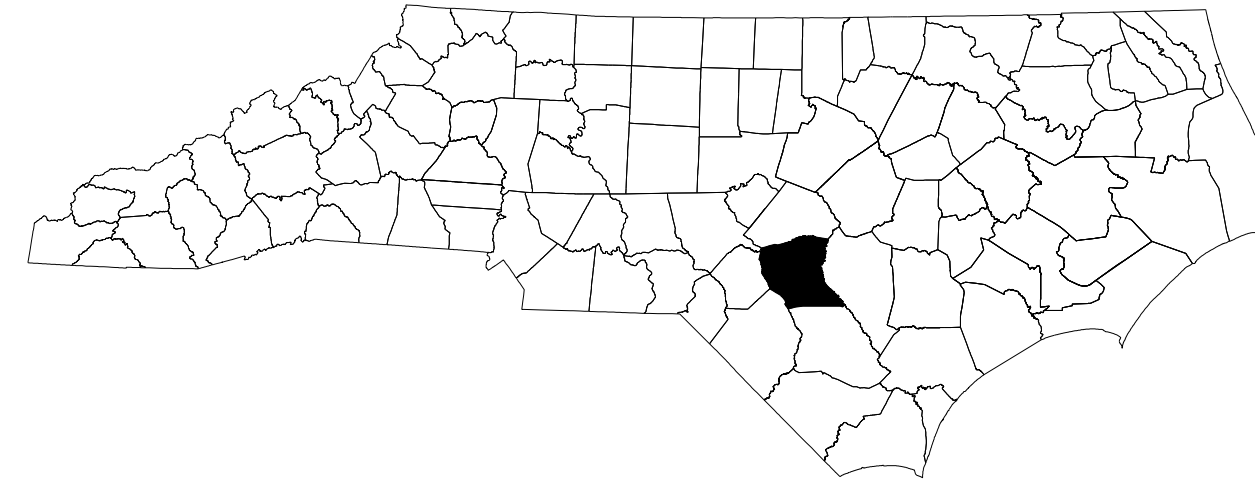


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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CUMBERLAND COUNTY



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-01	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-01A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-01B	SIGN AND DEVICE LEGEND
TMP-02	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES) AND PHASING
TMP-03	SPECIAL SIGN DESIGN
TMP-04	OFFSITE DETOUR

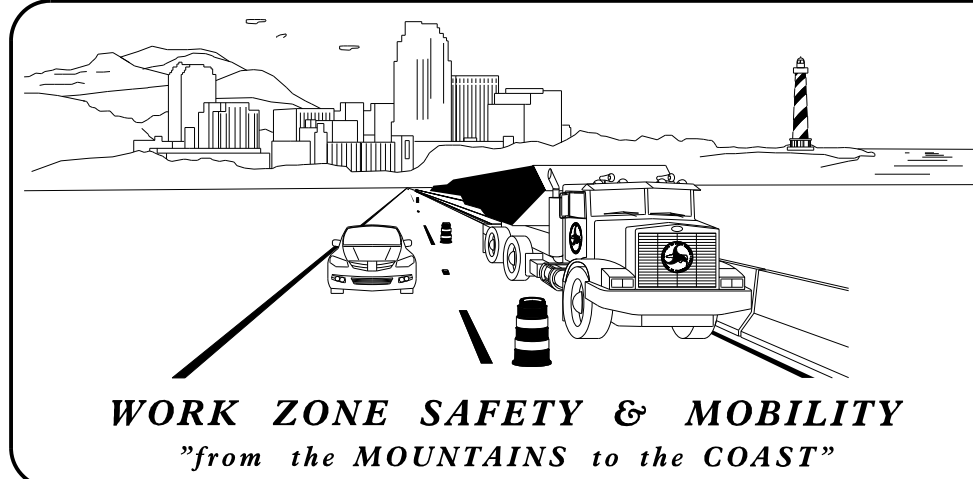
SHEET NO.

TMP-01

49218.9, 49218.15

TIP PROJECT:

5/1/2024
\\wei-fs01\projects\2023\23172\01\F+ Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\4 WZTC\49218.9.15_TMP_01 Title.dgn
User: AHayes



PLANS PREPARED BY:

R. K. MURPHY, P.E.

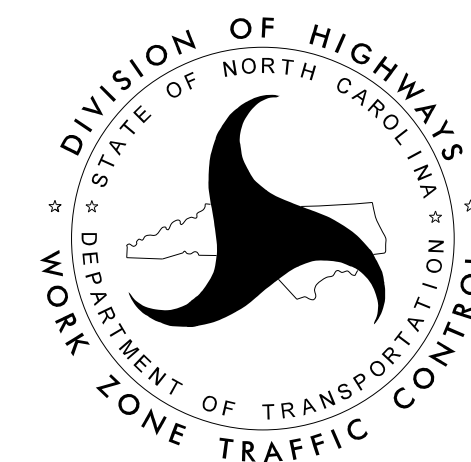
D. ALLEN HAYES, E.I.

NCDOT CONTACTS:

CHRISTY W. HUFF, P.E.

PROJECT ENGINEER

PROJECT DESIGN ENGINEER

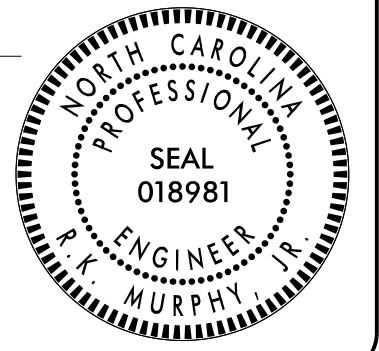


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687DF3E840AF42C...

DATE: 5/1/2024

SEAL



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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

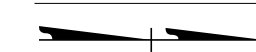
ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.03	TEMPORARY ROAD CLOSURES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

 NORTH ARROW

TRAFFIC CONTROL DEVICES

 BARRICADE (TYPE III)

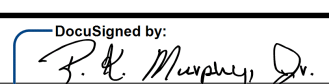
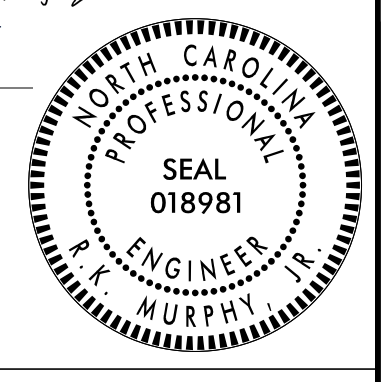
TEMPORARY SIGNING

 STATIONARY SIGN

5/1/2024
\\wei-fs01\projects\2023\23172.01\F+ Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\4 WZTC\49218.9.15_TMP_01A Legend.dgn
User: AHayes

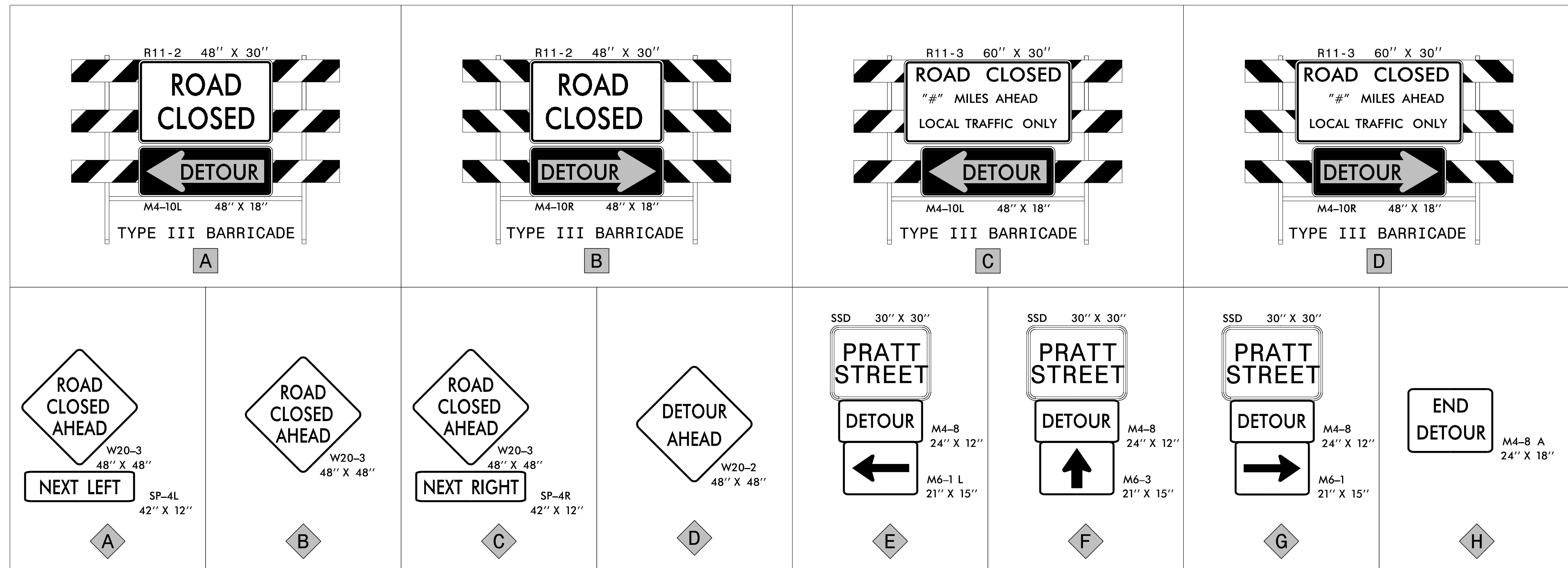
 **WETHERILL ENGINEERING**
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
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Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

APPROVED: 
DATE: 5/1/2024




LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND



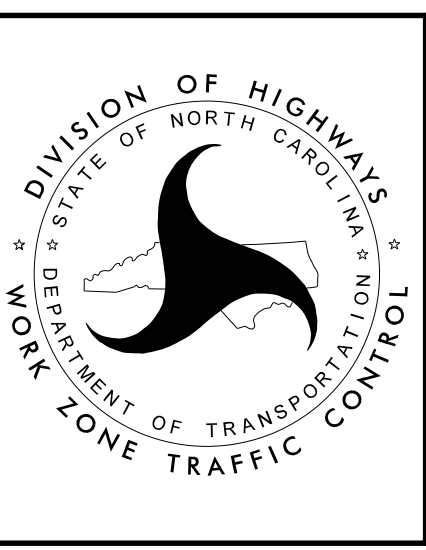
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X BARRICADES
-WITH MOUNTED SIGNING

X SIGNING
-STATIONARY MOUNTED

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Fax: 919 851 8107

APPROVED: *[Signature]*
DATE: 5/1/2024
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 018981
MURPHY



SIGN AND DEVICE LEGEND

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJ. REFERENCE NO.	SHEET NO.
49218.9,49218.15	TMP-02

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

AND

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

AND

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

MANAGEMENT STRATEGIES

THE FOLLOWING LISTED WORK ZONE STRATEGIES ARE RECOMMENDED FOR INCLUSION WITHIN THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED STRATEGIES:

TRAFFIC MANAGEMENT STRATEGIES:
ONE-LANE, TWO WAY OPERATION (FLAGGING)
OFF-SITE DETOURS

PHASING

STEP 1) INSTALL ALL OFFSITE DETOUR SIGNING AND ROAD CLOSURE SIGNING. COVER SIGNS USING AN APPROVED METHOD PER THE DISCRETION OF THE ENGINEER.
[SEE SHEETS TMP-01B & 04]

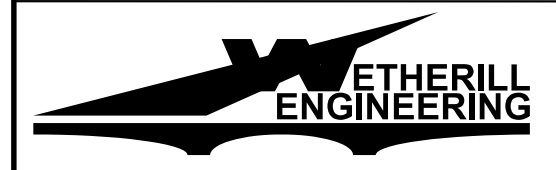
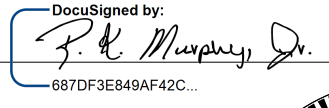
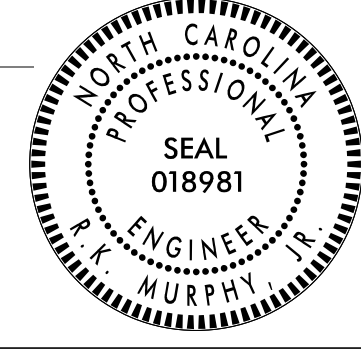

STEP 2) WHEN READY TO CLOSE THE ROADWAY, UNCOVER THE DETOUR AND ROAD CLOSURE SIGNING, CLOSE COLLINS ST. AND OGDEN ST., AND DETOUR TRAFFIC. INSTALL WING BARRICADES ON DUNHAM RD.
[SEE SHEETS TMP-01B & 04]

STEP 3) AWAY FROM TRAFFIC, CONSTRUCT COLLINS ST. AND OGDEN ST. FROM THE BEGIN PROJECT LIMITS TO THE END PROJECT LIMITS UP TO AND INCLUDING THE FINAL LIFT OF SURFACE COURSE, AND FINAL PAVEMENT MARKINGS AND MARKERS.
[SEE ROADWAY PLANS AND FINAL PAVEMENT MARKING PLAN]

USING ROADWAY STANDARD DRAWING 1101.02, CONSTRUCT DUNHAM ST. AND DEGLOPPER ST. FROM THE BEGIN PROJECT LIMITS TO THE END PROJECT LIMITS UP TO AND INCLUDING THE FINAL LIFT OF SURFACE COURSE, AND FINAL PAVEMENT MARKINGS AND MARKERS.
[SEE ROADWAY PLANS AND FINAL PAVEMENT MARKING PLAN]

STEP 4) OPEN ALL ROADS TO THE FINAL TRAFFIC PATTERN, AND REMOVE ALL ROAD CLOSURE SIGNING, OFFSITE DETOUR SIGNING, AND TEMPORARY TRANSPORTATION MANAGEMENT DEVICES.
[SEE SHEET TMP-04 FOR SIGN LOCATIONS]

5/1/2024 \\wei-fs01\projects\2023\23172.01\1+ Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\4 WZTC\49218.9.15.TMP_02 GN&P.dgn User:AHayes

 <p>1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107</p> <p>TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION</p>	<p>APPROVED:  DATE: 5/1/2024</p> 		<p>TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES) AND PHASING</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

SIGN NUMBER: name TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-0" HEIGHT: 2'-6" TOTAL AREA: 7.5 Sq.Ft. BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5" NO. Z BARS: LENGTH:	BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBOl X Y WID HT MAT'L: 0.080" (2.0 mm) ALUMINUM	DESIGN BY: DAH PROJECT ID: 49218.9,49218.15	CHECKED BY: WEI LOCATION: OFFSITE DETOUR	Mar 13, 2024 DIV: 6
--	--	--	---	------------------------

BORDER
 R=1.5"
 TH=0.63"
 IN=0.38"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

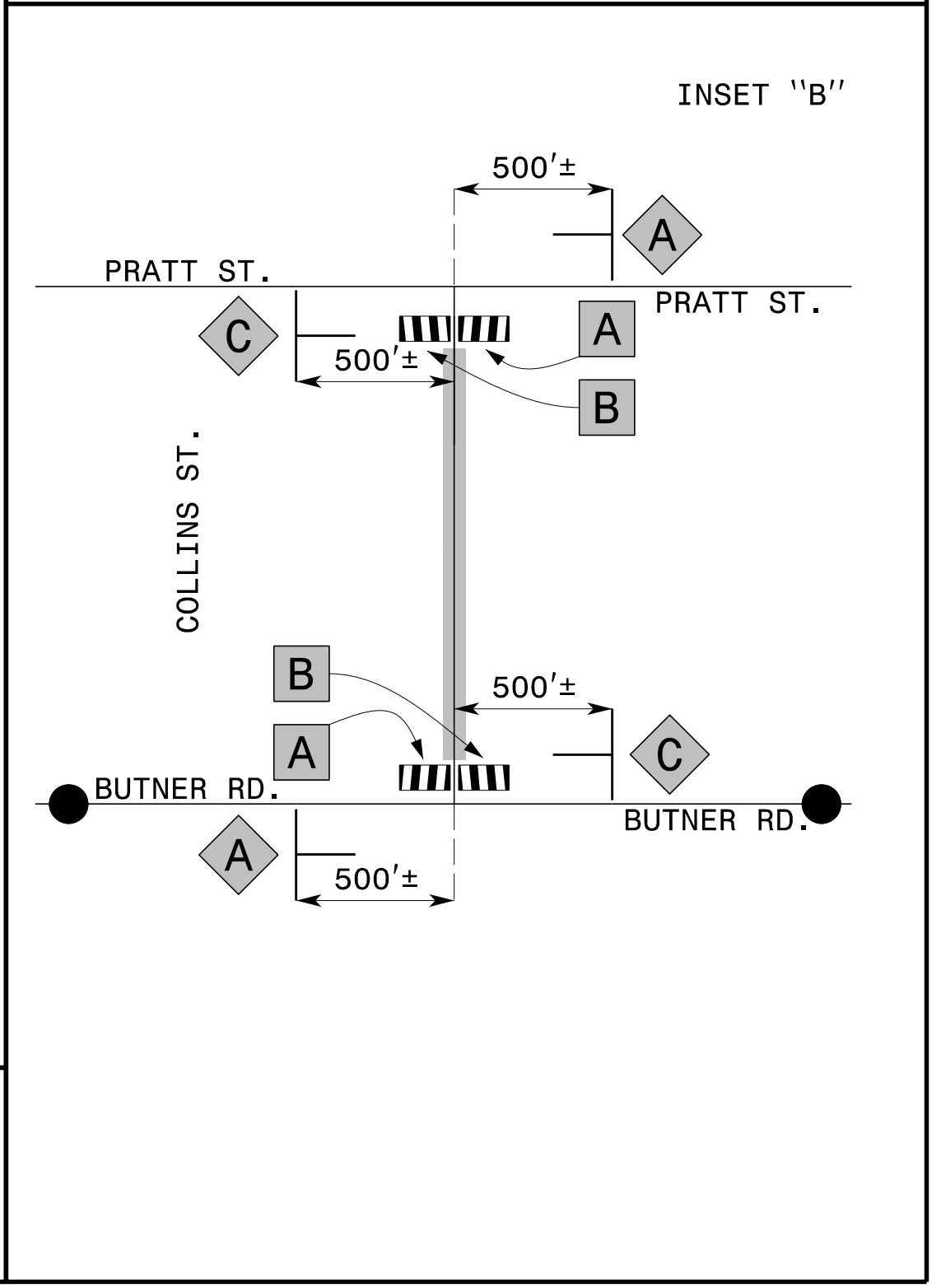
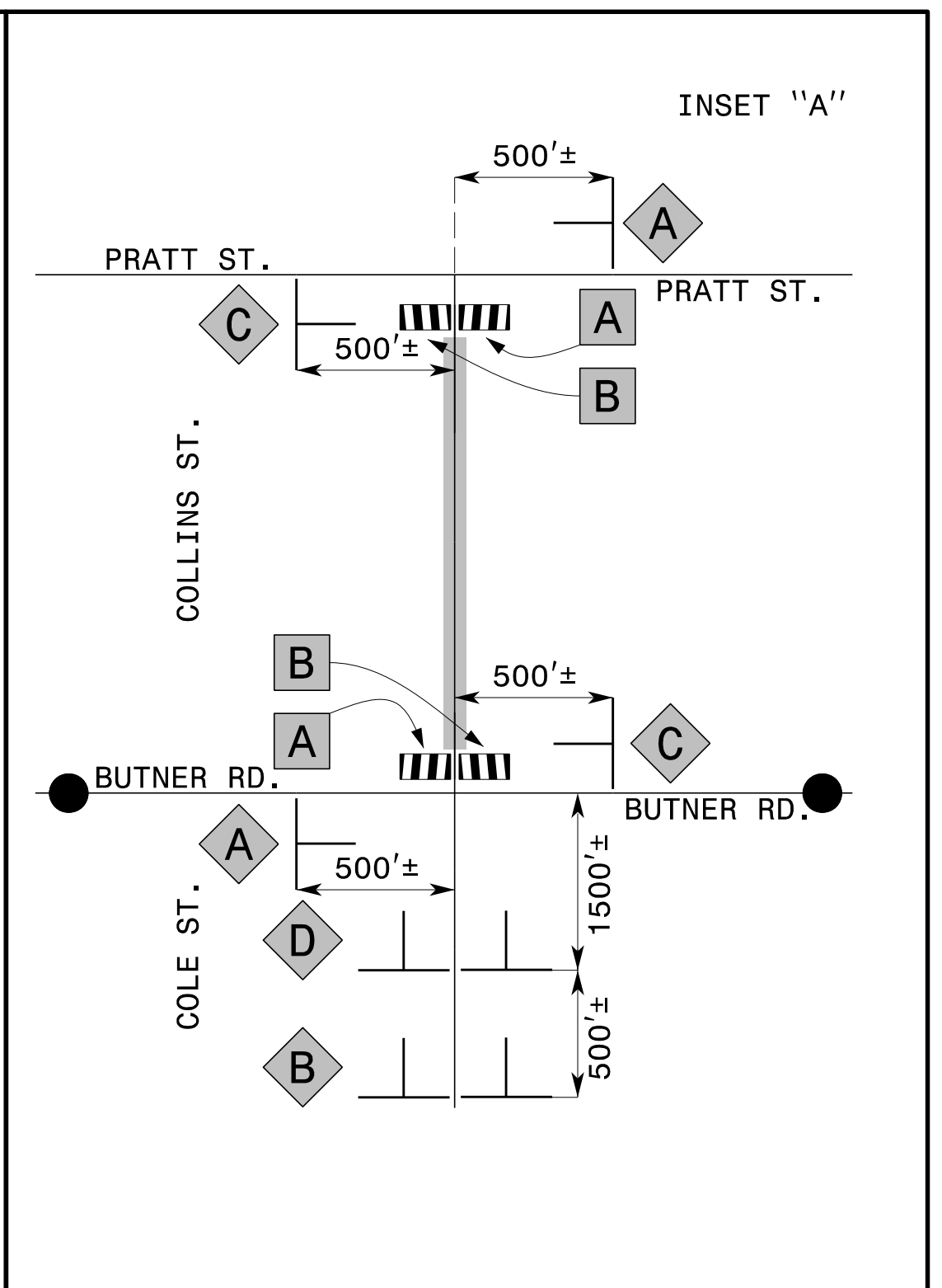
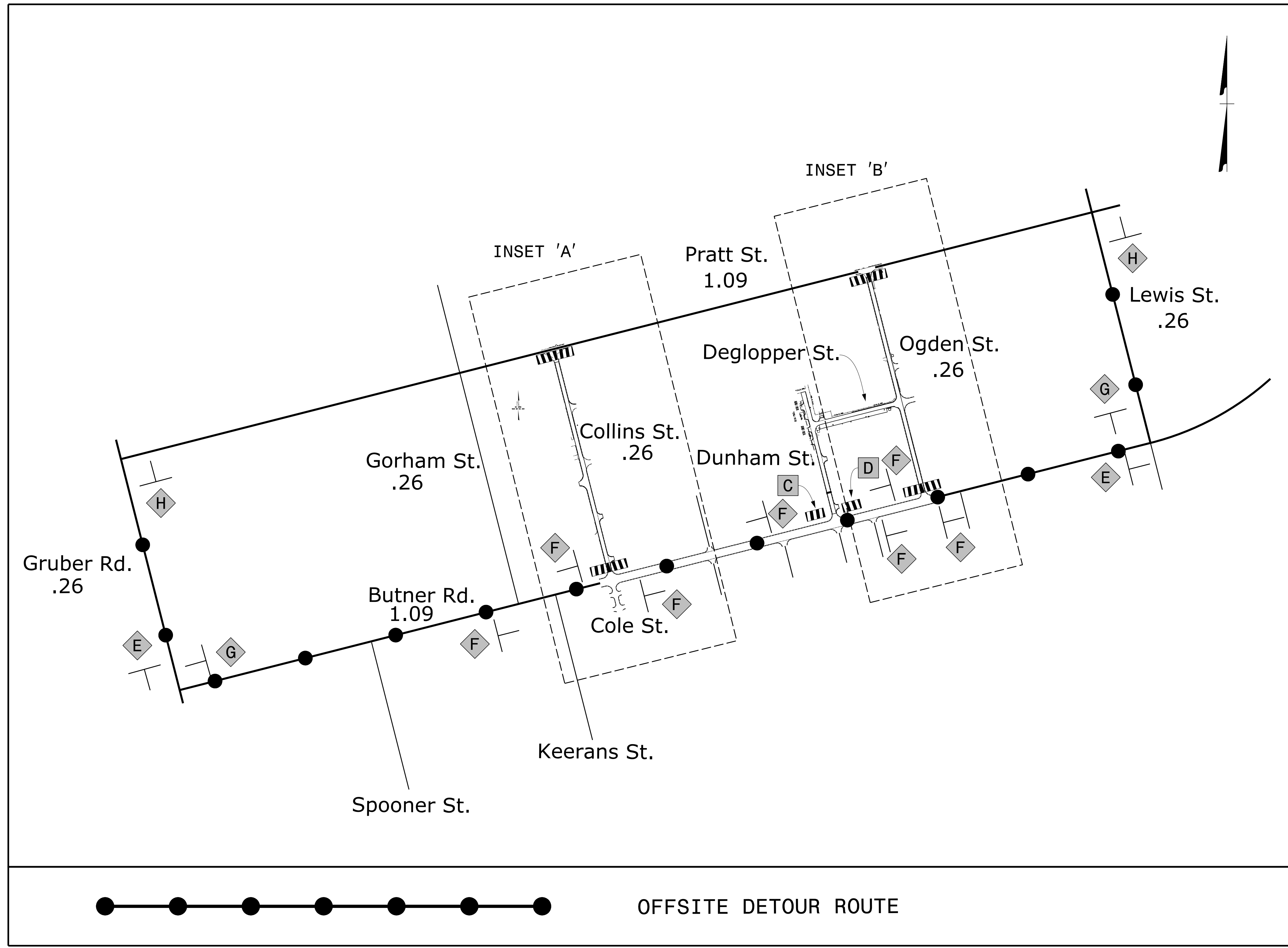
Letter locations are panel edge to lower left corner

	P	R	A	T	T														Series/Size Text Length
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	6.5	10.4	14.3	18.7	22.8	26.4													C 2000 22.9

FILENAME: Div6FtBraggC+_REF_BSSD PRATT NORTH CAROLINA D.O.T. SIGN DETAIL

5/1/2024
 \\wei-fs01\projects\2023\23172.01\F+ Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\4 WZTC\49218.9\15_TMP_03_SSD.dgn
 User: AHayes

 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION	APPROVED: DATE: 5/1/2024			<p style="font-size: 24px; font-weight: bold;">SPECIAL SIGN DESIGN</p>
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5/1/2024
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 User: AHayes

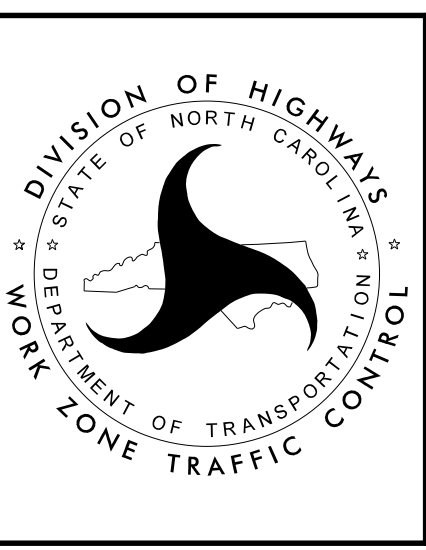
NOTES:
 1) REFER TO SHEET TMP-01B FOR SIGN AND DEVICE LEGEND.
 2) FOR INSET "A" AND "B", REFER TO ROADWAY STANDARD DRAWINGS 1101.03, SHEETS 1 & 2 OF 9 FOR APPLICABLE NOTES.

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DATE: 5/1/2024

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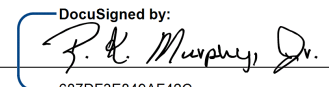
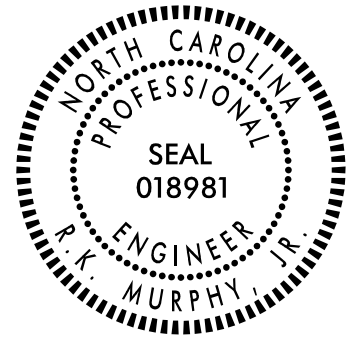
OFFSITE DETOUR

5/1/2024 \\w24\fs0\projects\2023\23172\01\1 Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\Pavement Markings\49218.9.15_PMP_01.dgn User:AHayes

T.I.P.: 49218.9,49218.15

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
CUMBERLAND COUNTY**

<small>TIP NO.</small> 49218.9,49218.15	<small>SHEET NO.</small> PMP-01
<small>APPROVED:</small> 	
<small>DATE:</small> 5/1/2024	
	
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INDEX

<small>SHEET NO.</small>	<small>DESCRIPTION</small>
PMP-01	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-02 - 03	PAVEMENT MARKING DETAIL

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

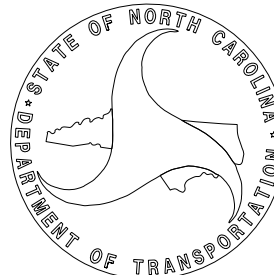
<small>STD. NO.</small>	<small>TITLE</small>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

FINAL PAVEMENT MARKING SCHEDULE

<small>SYMBOL</small>	<small>DESCRIPTION</small>	<small>PAY ITEM</small>
T1	WHITE SOLID EDGE LINE	THERMOPLASTIC (4", 90 MIL)
T5	2 FT. - 6 FT./SP WHITE MINISKIP	THERMOPLASTIC (4", 90 MIL)
T13	YELLOW DOUBLE CENTER	THERMOPLASTIC (4", 90 MIL)
T61	WHITE STOPBAR	THERMOPLASTIC (24", 90 MIL)
T62	WHITE CROSSWALK LINE (HIGH VISIBILITY)	THERMOPLASTIC (24", 90 MIL)
MA	YELLOW & YELLOW	PERMANENT RAISED MARKER

PLAN SUBMITTED TO:

CHRISTY W. HUFF, P.E. DIVISION PROJECT MANAGER



GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

<small>ROAD NAME</small>	<small>MARKING</small>	<small>MARKER</small>
ALL ROADS	THERMOPLASTIC	PERMANANT RAISED MARKERS
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- E) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- F) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.
- G) ALL STATION ARE CONSIDERED +/- UNLESS OTHERWISE SHOWN ON THE PLANS.

PLAN PREPARED BY: Wetherill Engineering, Inc.

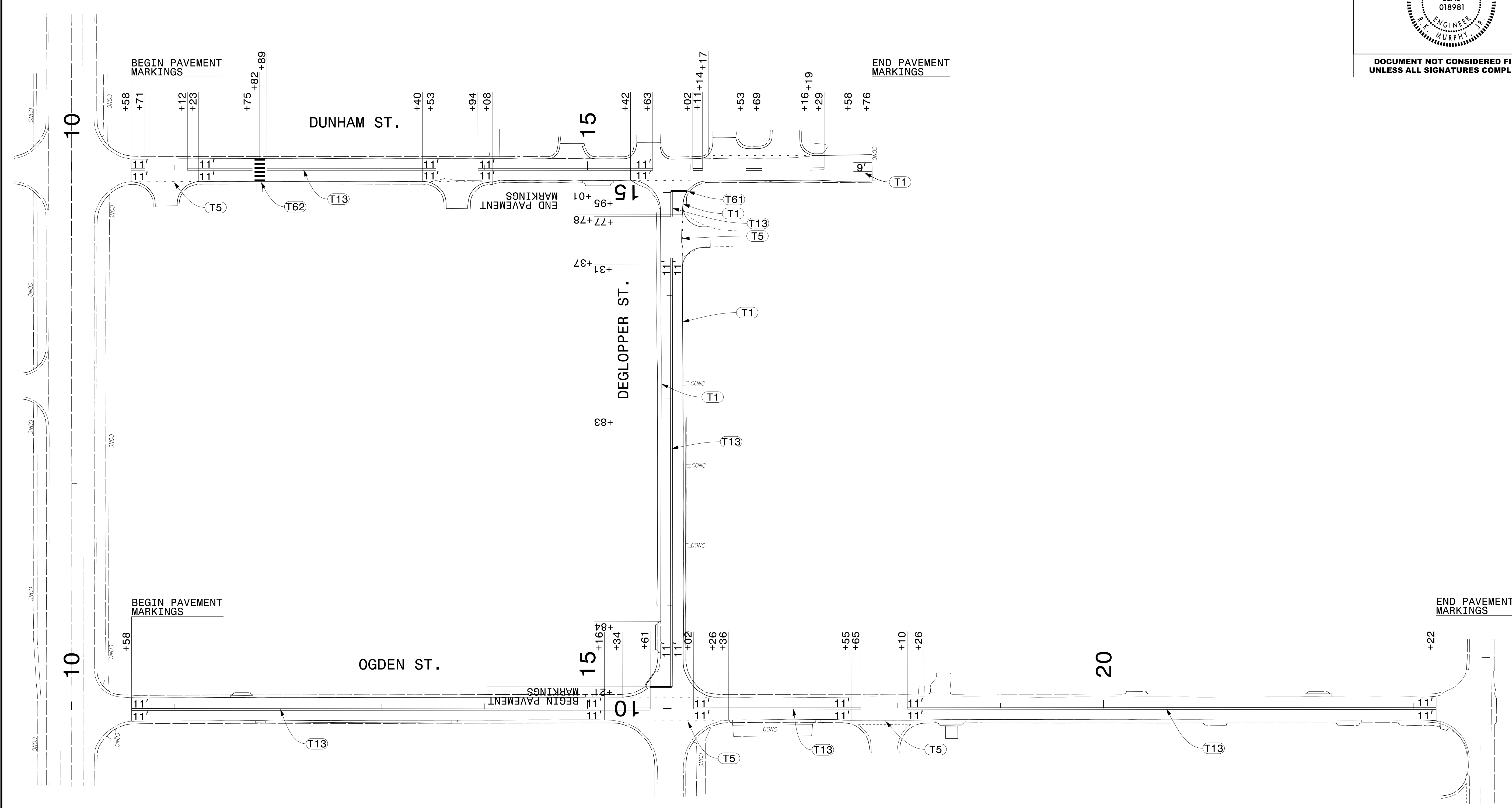
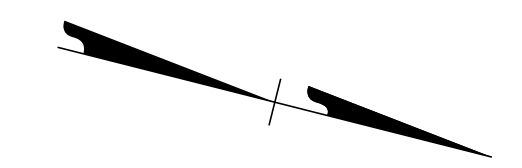
R. K. MURPHY, P.E. PROJECT MANAGER
D. ALLEN HAYES, E.I. TRAFFIC DESIGN ENGINEERING INTERN



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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

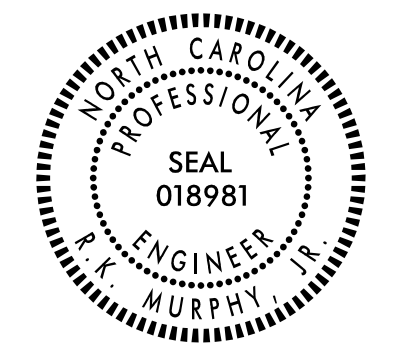
TIP NO. 49218.9, 49218.15	SHEET NO. PMP-02
APPROVED: <i>P. K. Murphy, Jr.</i>	
DATE: 5/29/2024	
SEAL	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

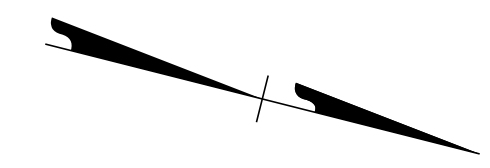


5/29/2024
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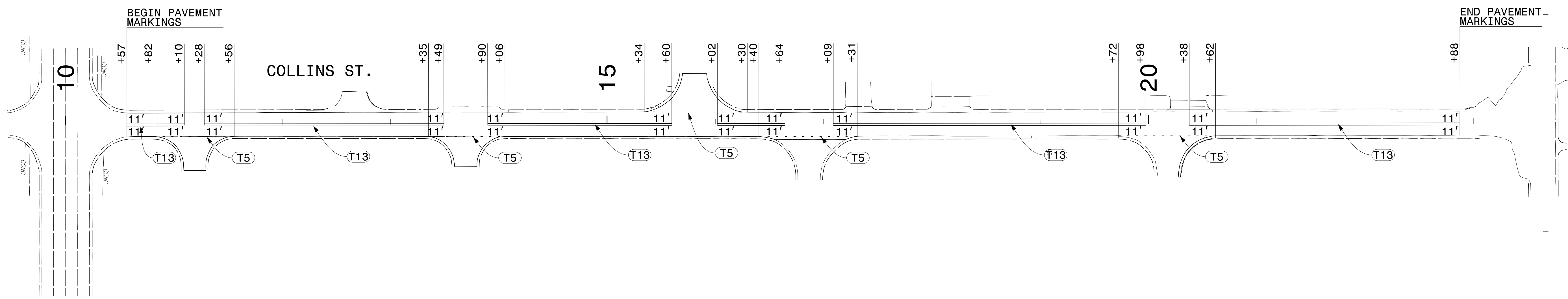
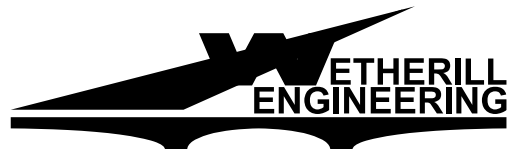
**WETHERILL
ENGINEERING**
 1223 Jones Franklin Rd.
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107
 TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PAVEMENT MARKING DETAIL

TIP NO. 49218.9, 49218.15	SHEET NO. PMP-03
APPROVED: <i>P. K. Murphy, Jr.</i> DATE: 5/1/2024	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



5/1/2024
\\w\p\projects\2023\23172\01\1 Liberty Mill & Repave\Traffic\Traffic Design\2 Plan Design\Markings\49218.9_15_PMP_03.dgn
User: AHayes

1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PAVEMENT MARKING DETAIL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	49218.9, 49218.15	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
49218.9, 49218.15		PE	

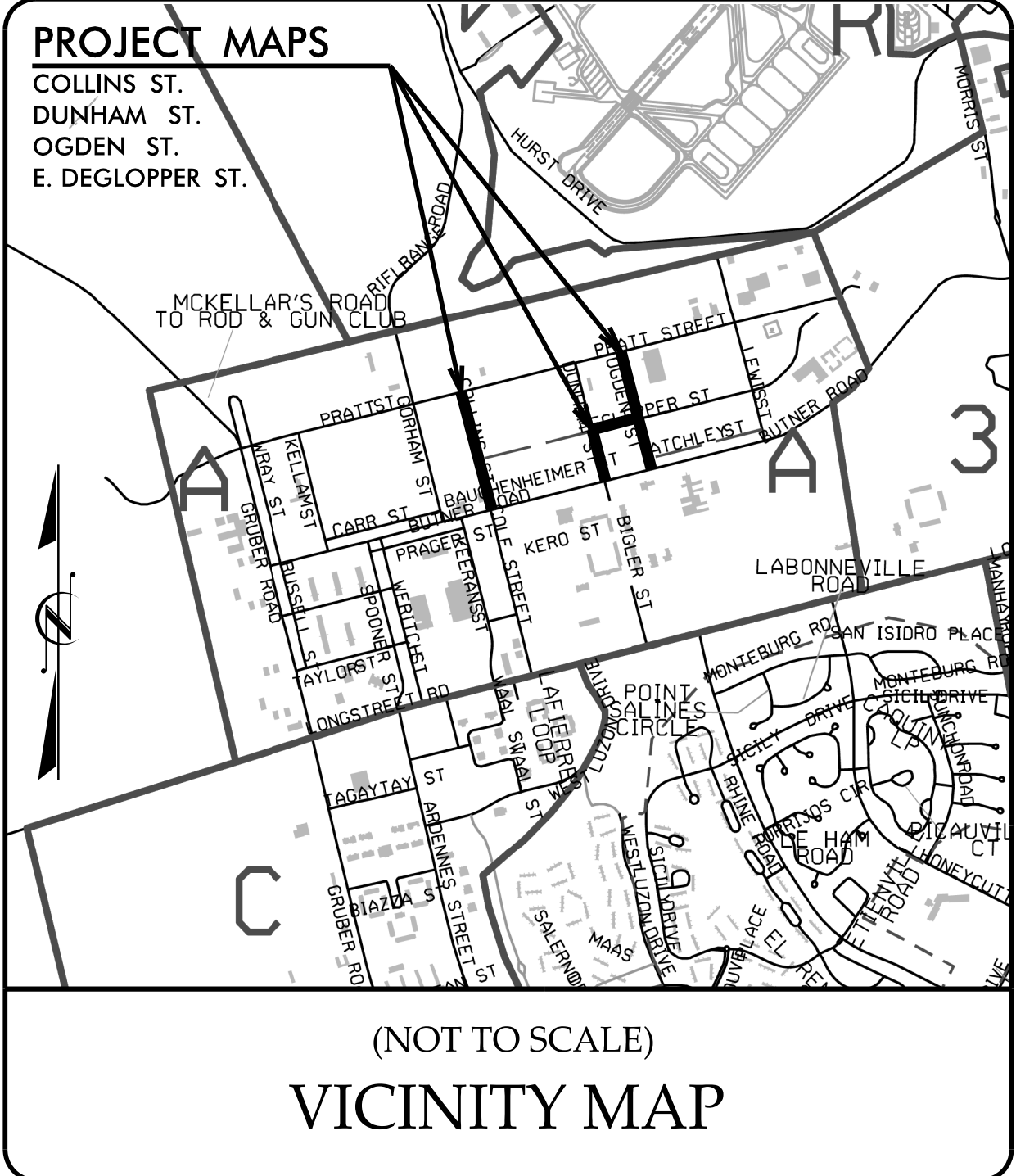
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

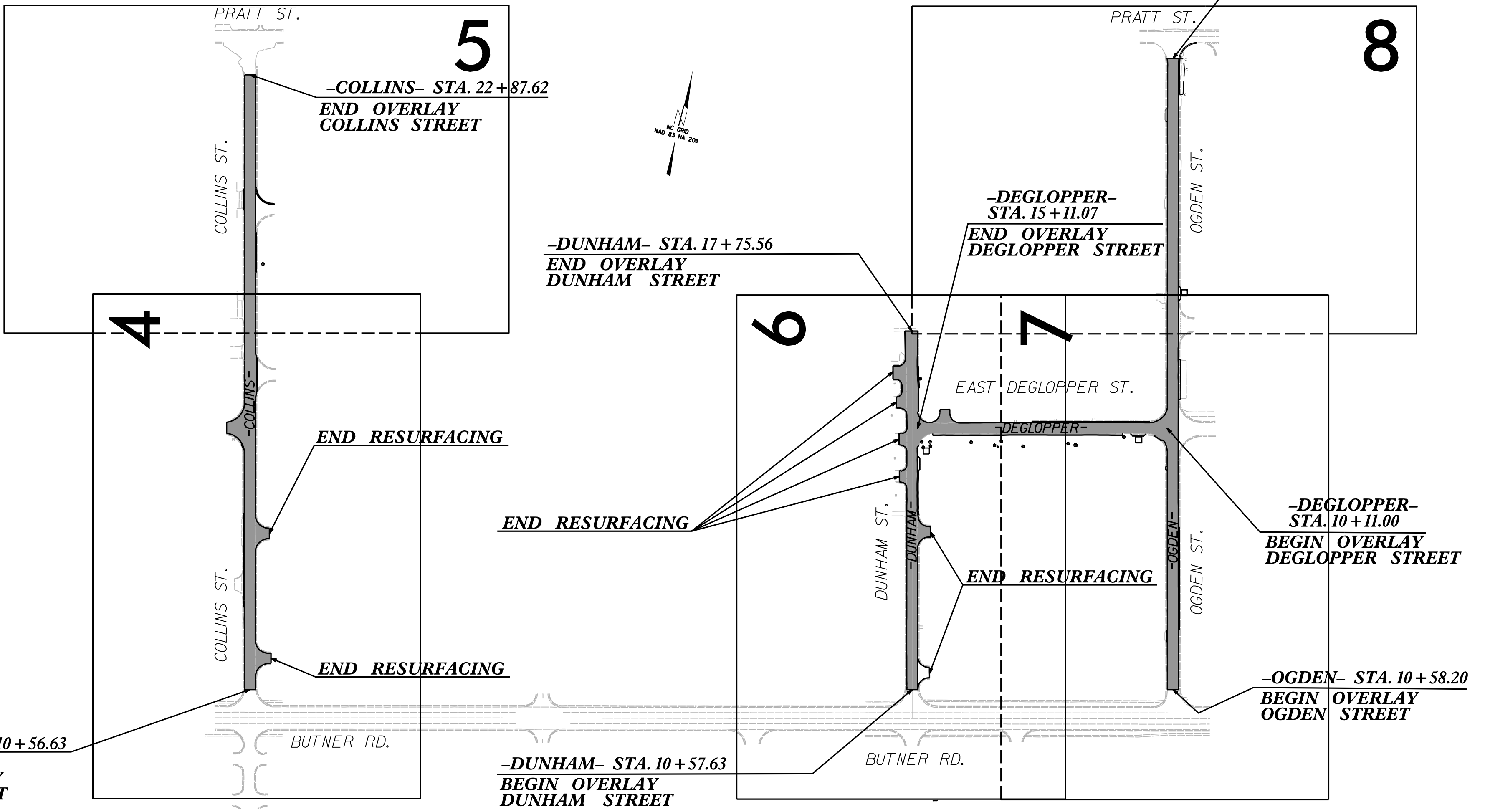
CUMBERLAND COUNTY

LOCATION: COLLINS STREET FROM BUTNER ROAD TO PRATT STREET
DUNHAM STREET FROM BUTNER ROAD TO THE PARKING LOT
OGDEN ROAD FROM BUTNER ROAD TO PRATT STREET
EAST DEGLOPPER STREET FROM DUNHAM STREET TO OGDEN ROAD

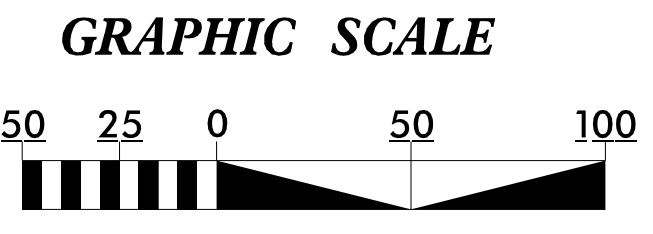
TYPE OF WORK: RESURFACING, PAVEMENT REHABILITATION, MILLING,
GRADING, DRAINAGE IMPROVEMENTS, CURB AND GUTTER
AND PAVEMENT MARKINGS



THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.



OF FORT LIBERTY



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH
THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000
GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019
AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.



Prepared In the Office of:
WETHERILL ENGINEERING, INC.
1223 JONES FRANKLIN ROAD
RALEIGH, NC 27606

Designed by:
KATIE ESTEP 4485
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

CONTRACT: DF00478 TIP PROJECT: 49218.9, 49218.15

5/14/2024 10:54 AM EC-1 TSH:agb USER:mkh@weth

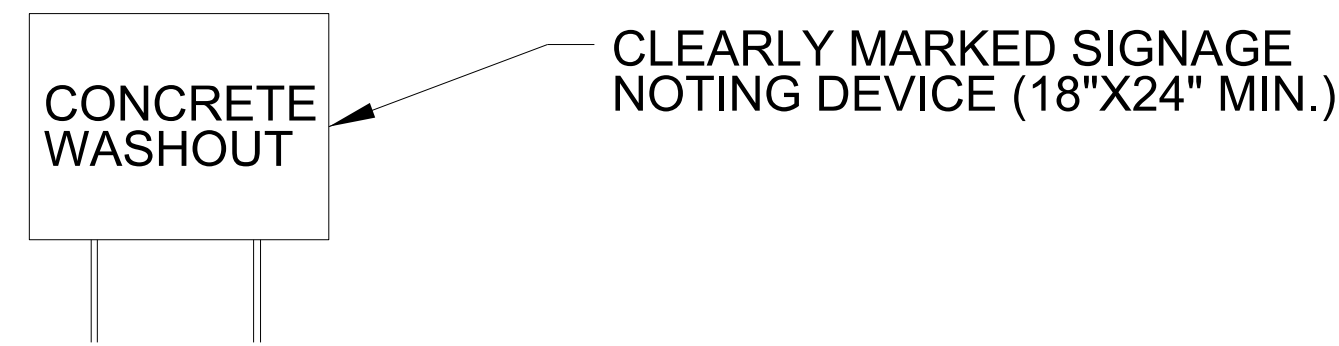
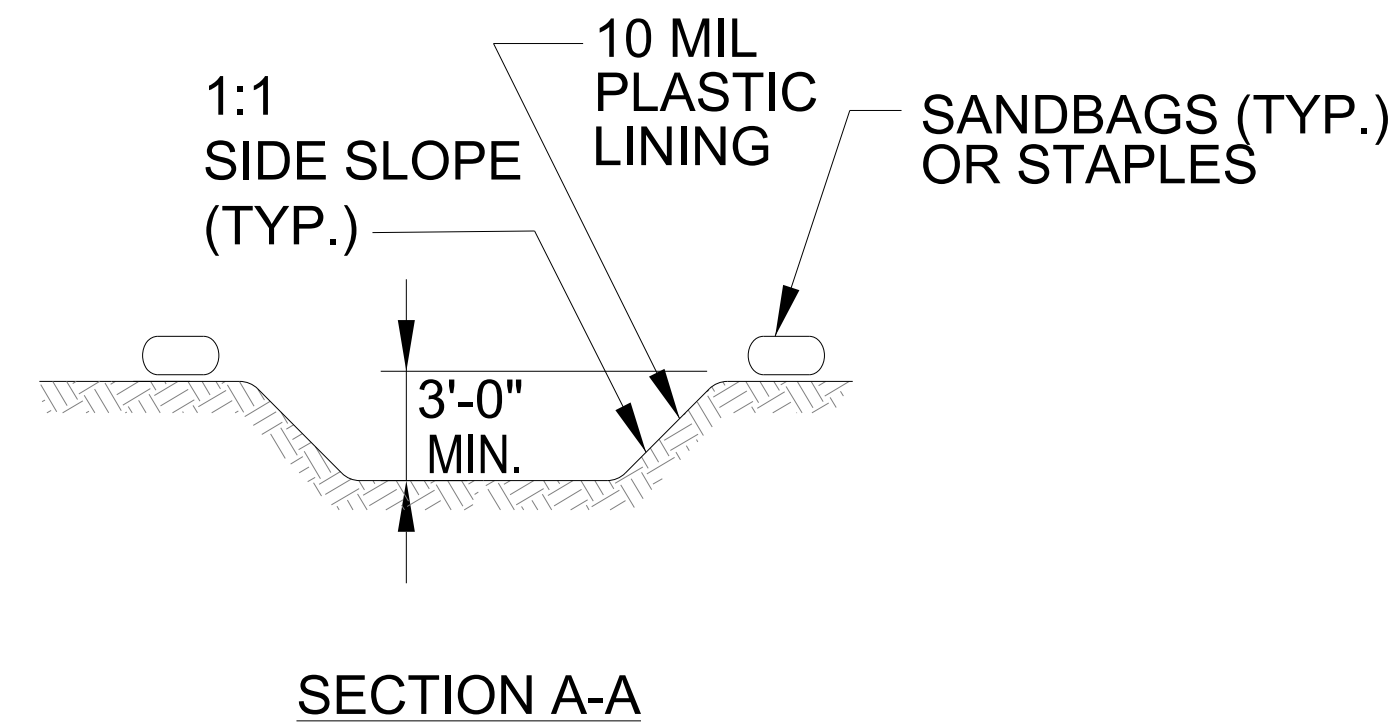
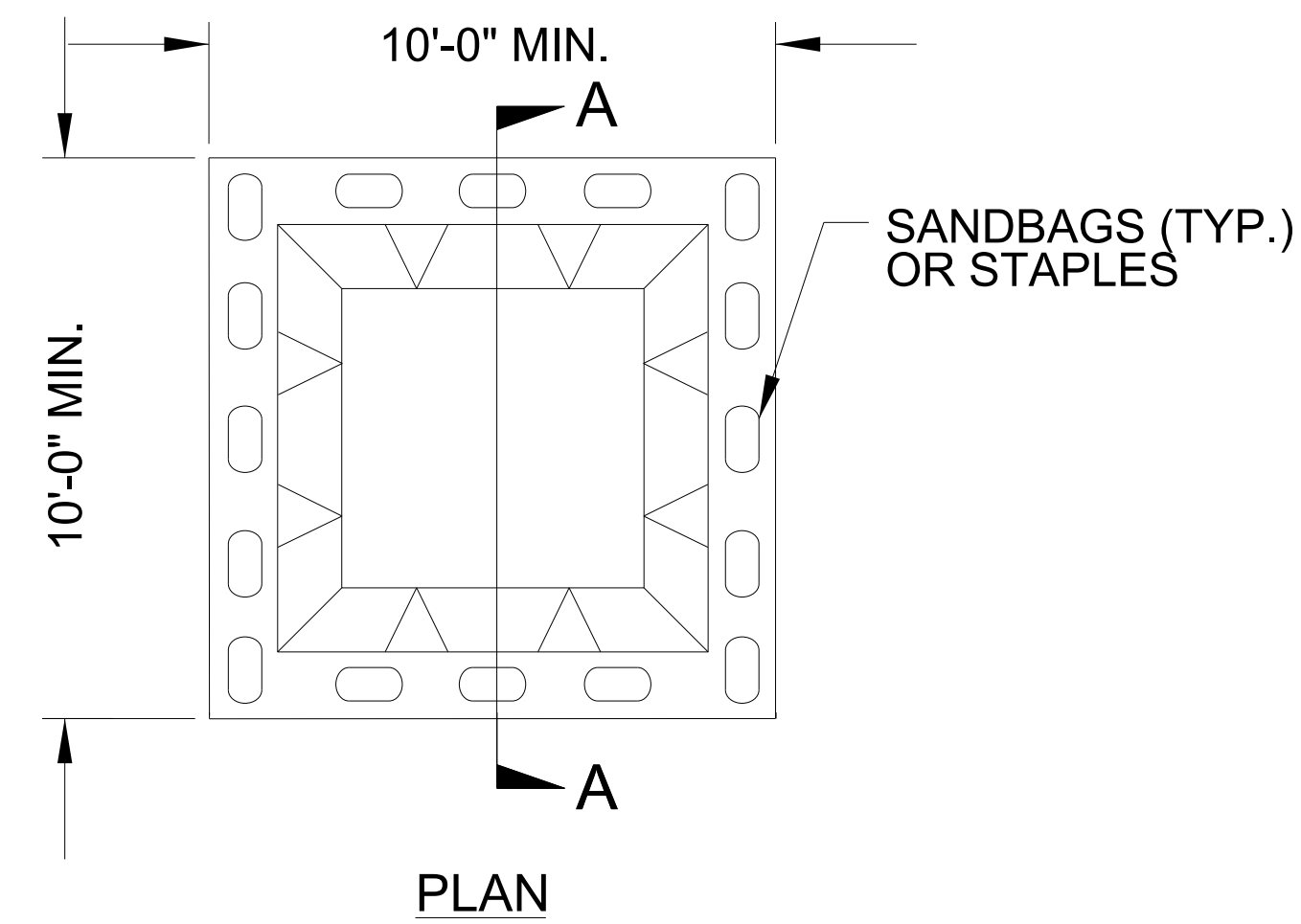
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
49218.9,49218.15	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
	Safety Fence		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A	A	1636.03	Excelsior Wattle Barrier	
1632.02	Type B	B	1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C	C			

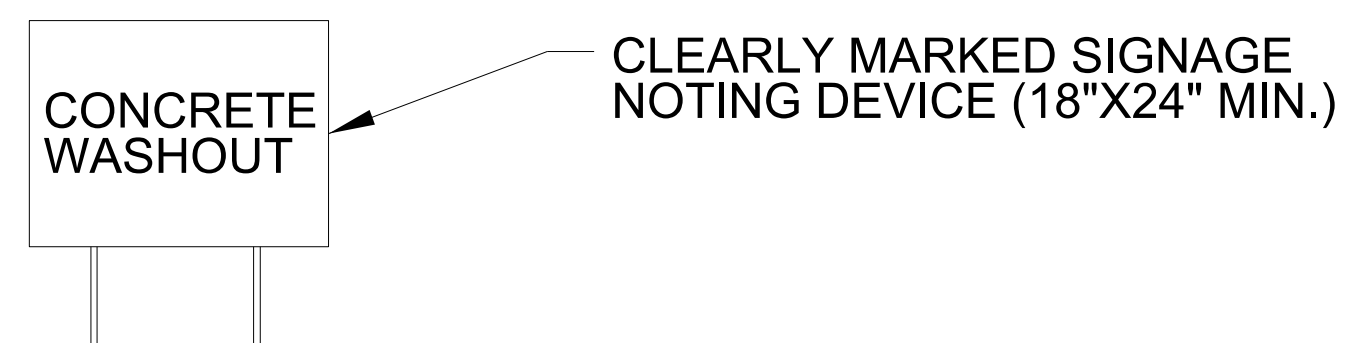
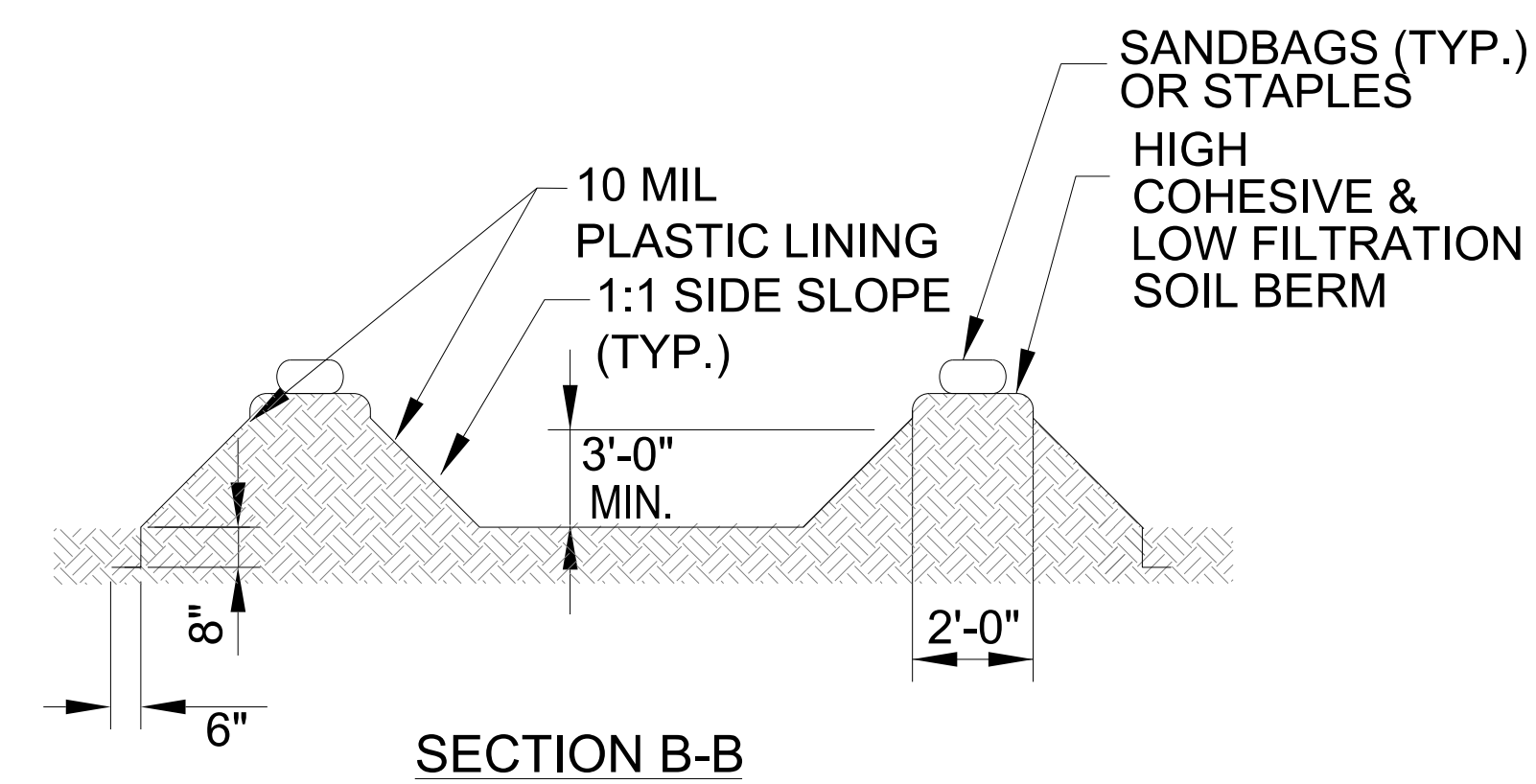
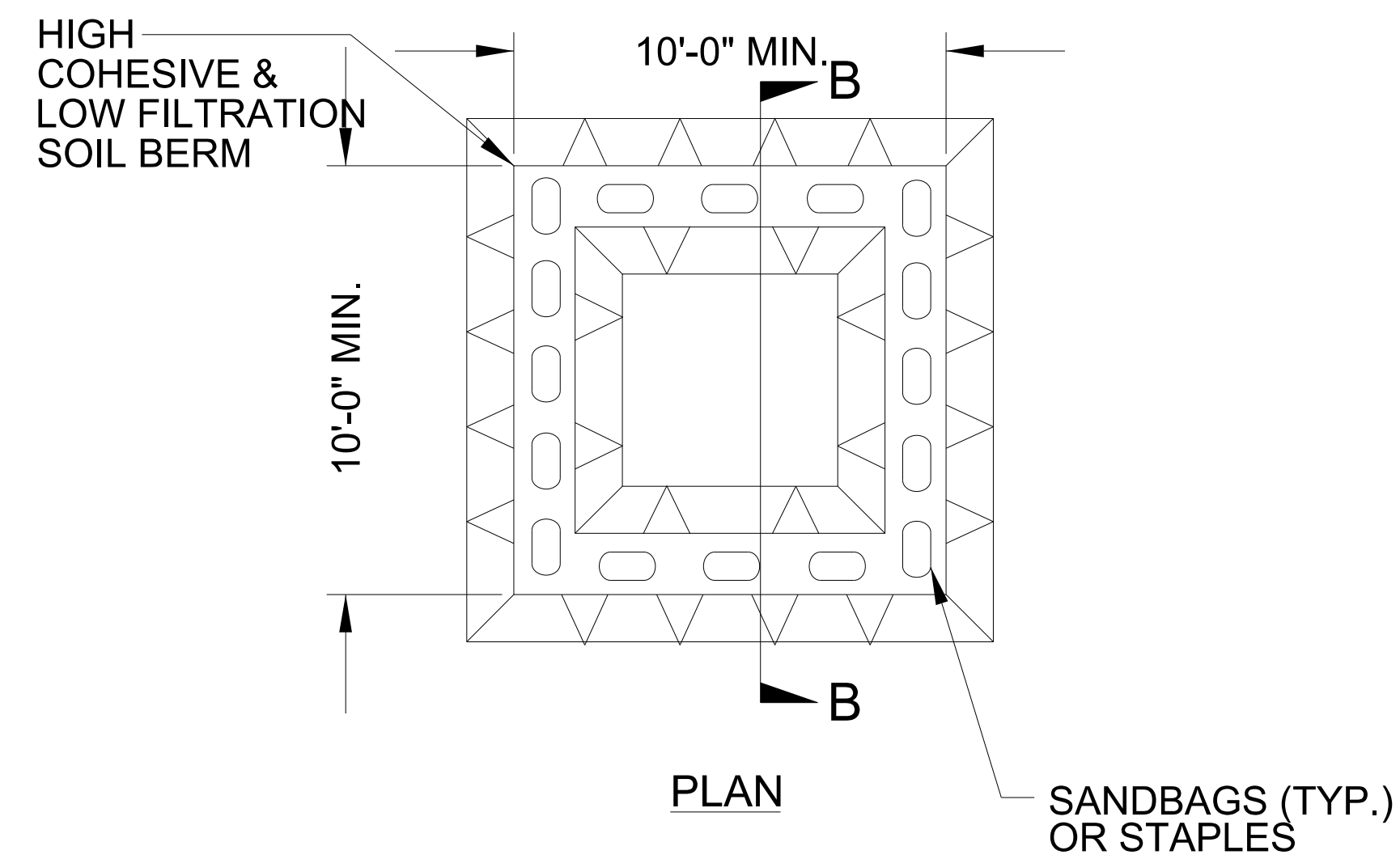
PROJECT REFERENCE NO. 49218.9, 49218.15	SHEET NO. EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
49218.9, 49218J5	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

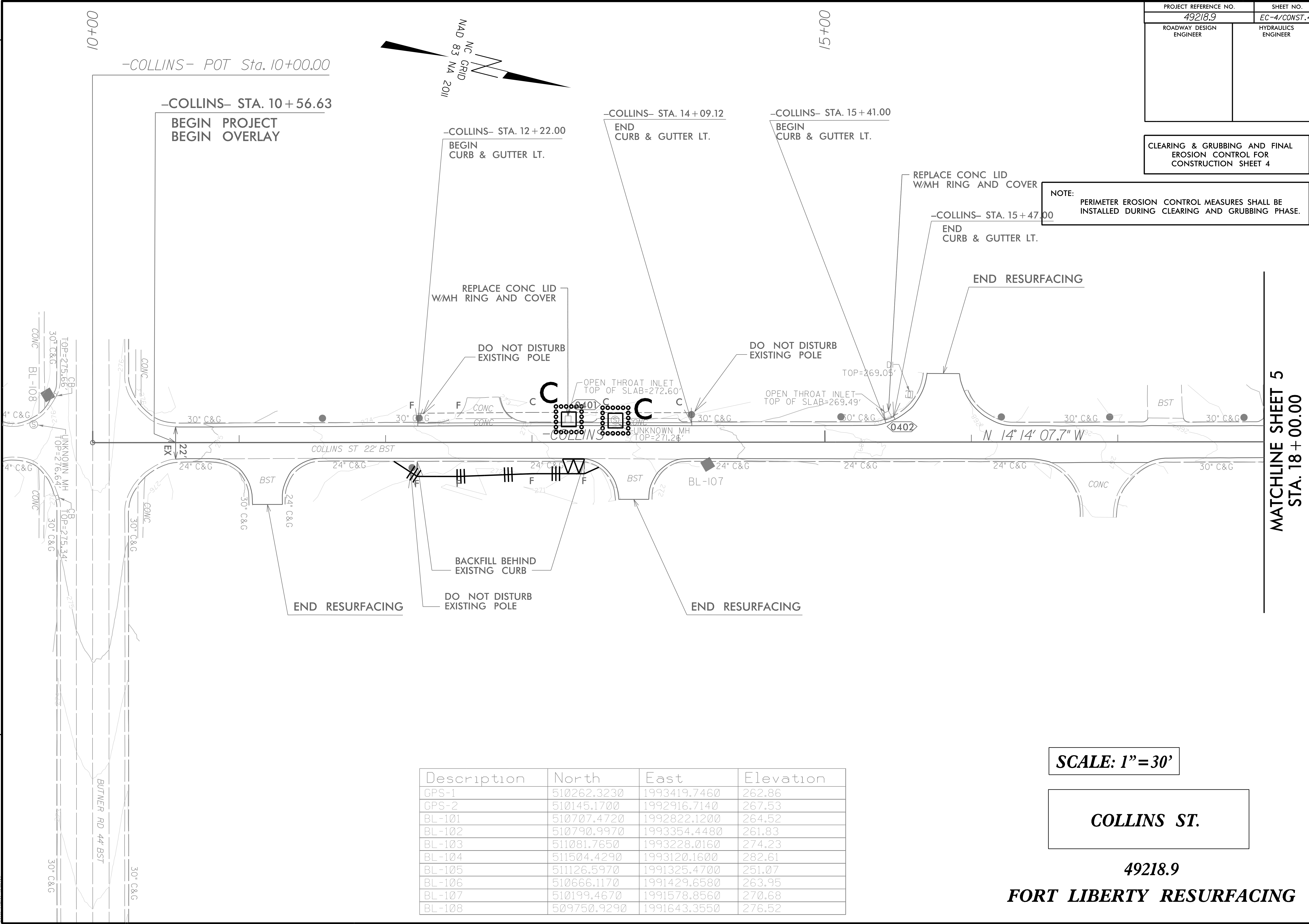
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

PROJECT REFERENCE NO. 49218.9	SHEET NO. EC-4/CONST.4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING & GRUBBING AND FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



MATCHLINE SHEET 5
STA. 18 + 00.00

SCALE: 1" = 30'

COLLINS ST.

49218.9
FORT LIBERTY RESURFACING

Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

8/17/99
5/1/2024
T:\Projects\49218.9\EC-4_PSH04_CG.dgn
USER: jk

8/17/99

PROJECT REFERENCE NO. 49218.9	SHEET NO. EC-5/CONST.5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING & GRUBBING AND FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 5

NOTE:
NO EROSION CONTROL MEASURES NECESSARY FOR THIS SECTION IN EITHER CONSTRUCTION PHASE.

-COLLINS- POT Sta. 23+64.32=
-PRATT- POT Sta. 17+00.72



Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

MATCHLINE SHEET 4 STA. 18+00.00

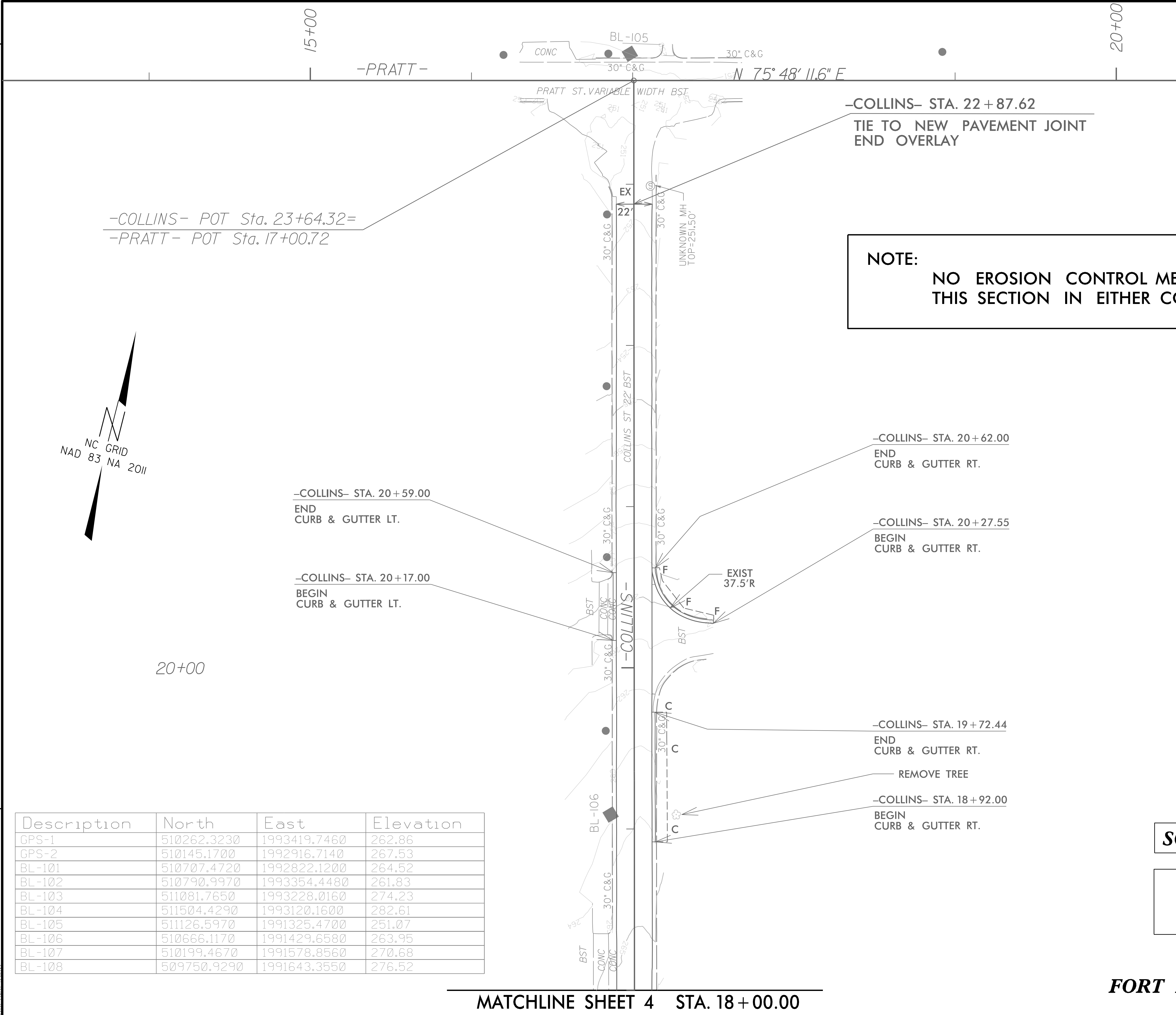
SCALE: 1" = 30'

COLLINS ST.

49218.9

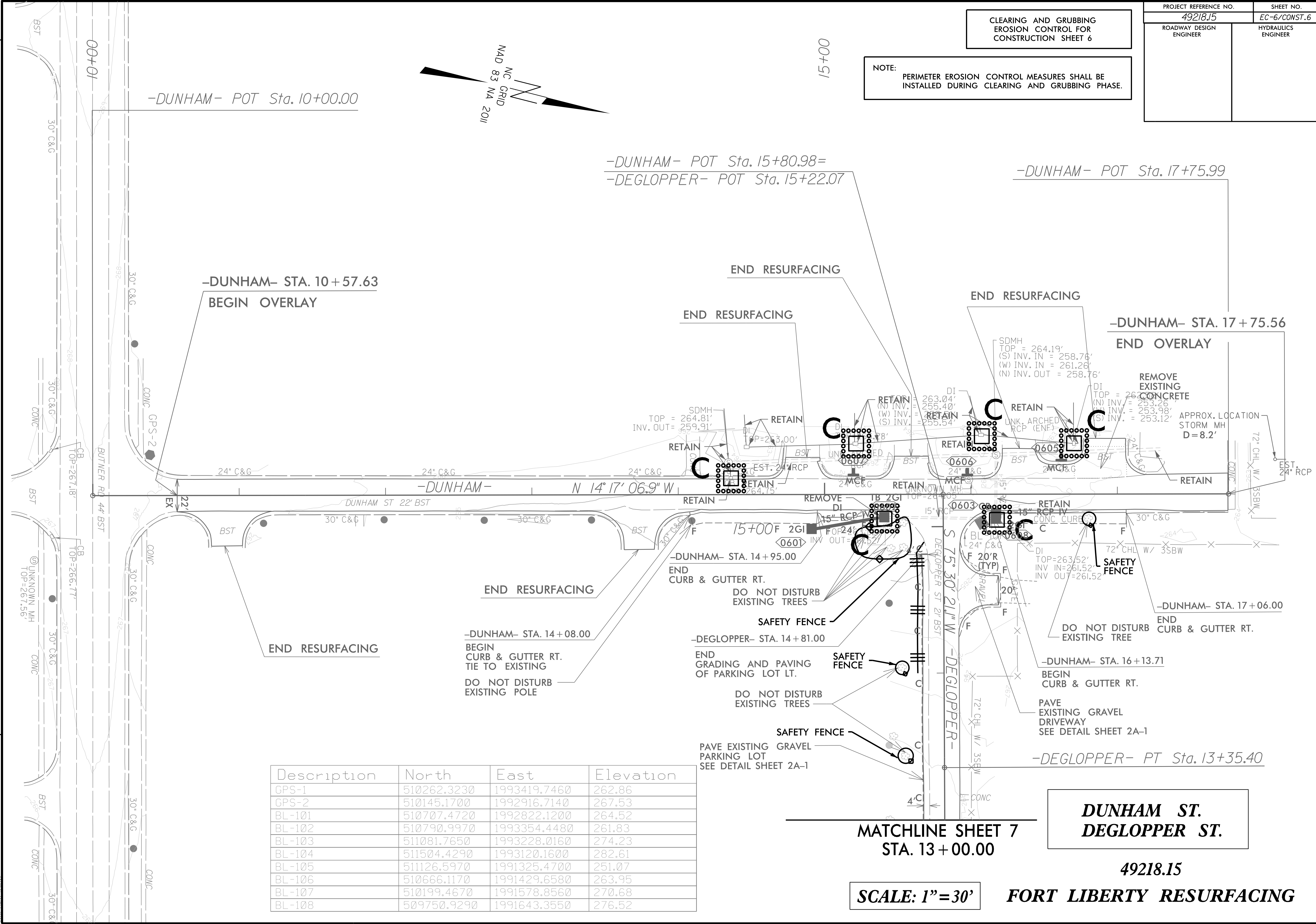
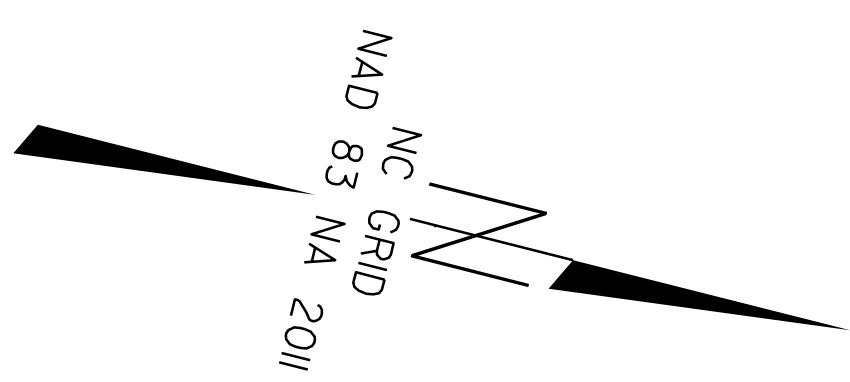
FORT LIBERTY RESURFACING

5/1/2024
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T:\S\24\EC-5-PSH05.dwg



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.



Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

MATCHLINE SHEET 7
STA. 13 + 00.00

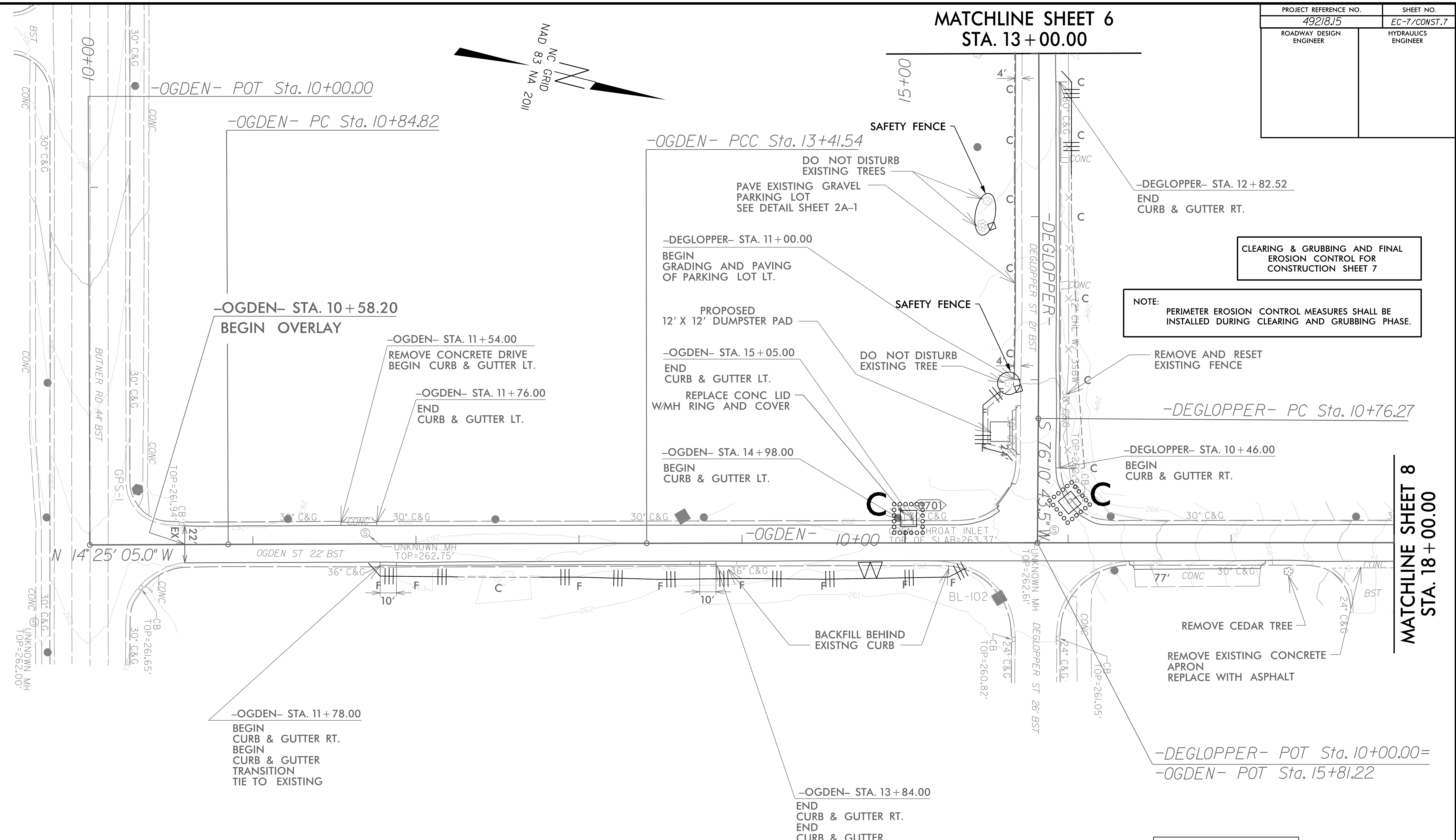
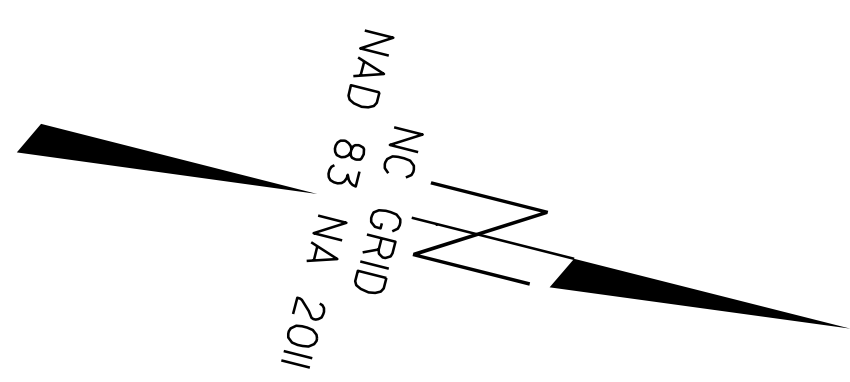
**DUNHAM ST.
DEGLOPPER ST.**

SCALE: 1" = 30'

49218.15
FORT LIBERTY RESURFACING

PROJECT REFERENCE NO. 49218.15	SHEET NO. EC-7/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**MATCHLINE SHEET 6
STA. 13+00.00**



CLEARING & GRUBBING AND FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 7

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

**MATCHLINE SHEET 8
STA. 18+00.00**

Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

-OGDEN-
 PI Sta 12+13.18
 $\Delta = 0^\circ 08' 14.2''$ (RT)
 $D = 0^\circ 03' 12.5''$
 $L = 256.72'$
 $T = 128.36'$
 $R = 107,147.40'$

-DEGLOPPER-
 PI Sta 12+05.84
 $\Delta = 0^\circ 40' 22.4''$ (LT)
 $D = 0^\circ 15' 34.8''$
 $L = 259.13'$
 $T = 129.57'$
 $R = 22,065.00'$

-DEGLOPPER-
 PI Sta 16+41.78
 $\Delta = 0^\circ 05' 47.3''$ (RT)
 $D = 0^\circ 00' 57.8''$
 $L = 600.48'$
 $T = 300.24'$
 $R = 356,606.18'$

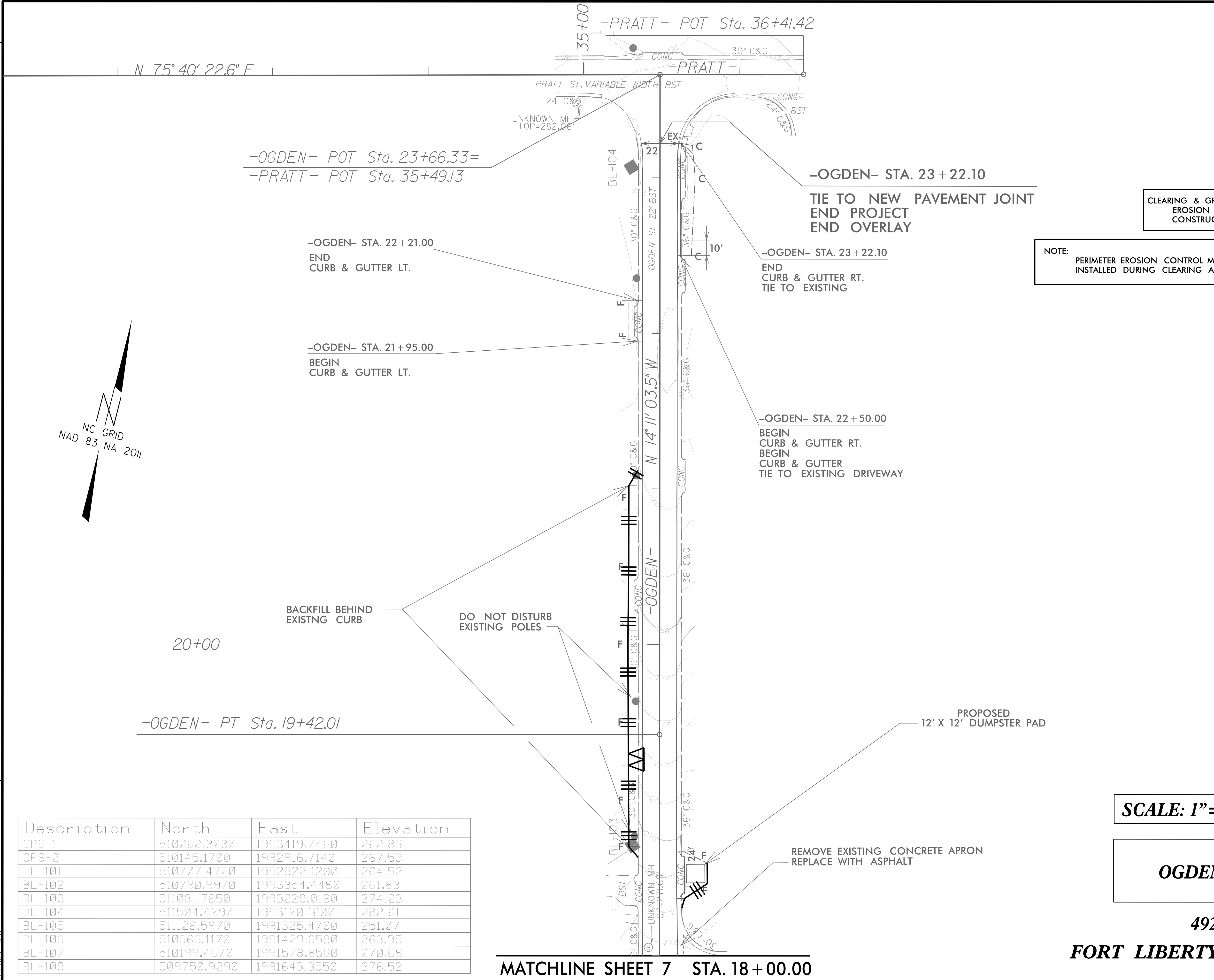
SCALE: 1" = 30'

**DEGLOPPER ST.
OGDEN ST.**

**49218.15
FORT LIBERTY RESURFACING**

PROJECT REFERENCE NO. 49218.15	SHEET NO. EC-8/CONST.8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99



CLEARING & GRUBBING AND FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 8

NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



20+00

-OGDEN- PT Sta. 19+42.01

Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

SCALE: 1" = 30'

OGDEN ST.

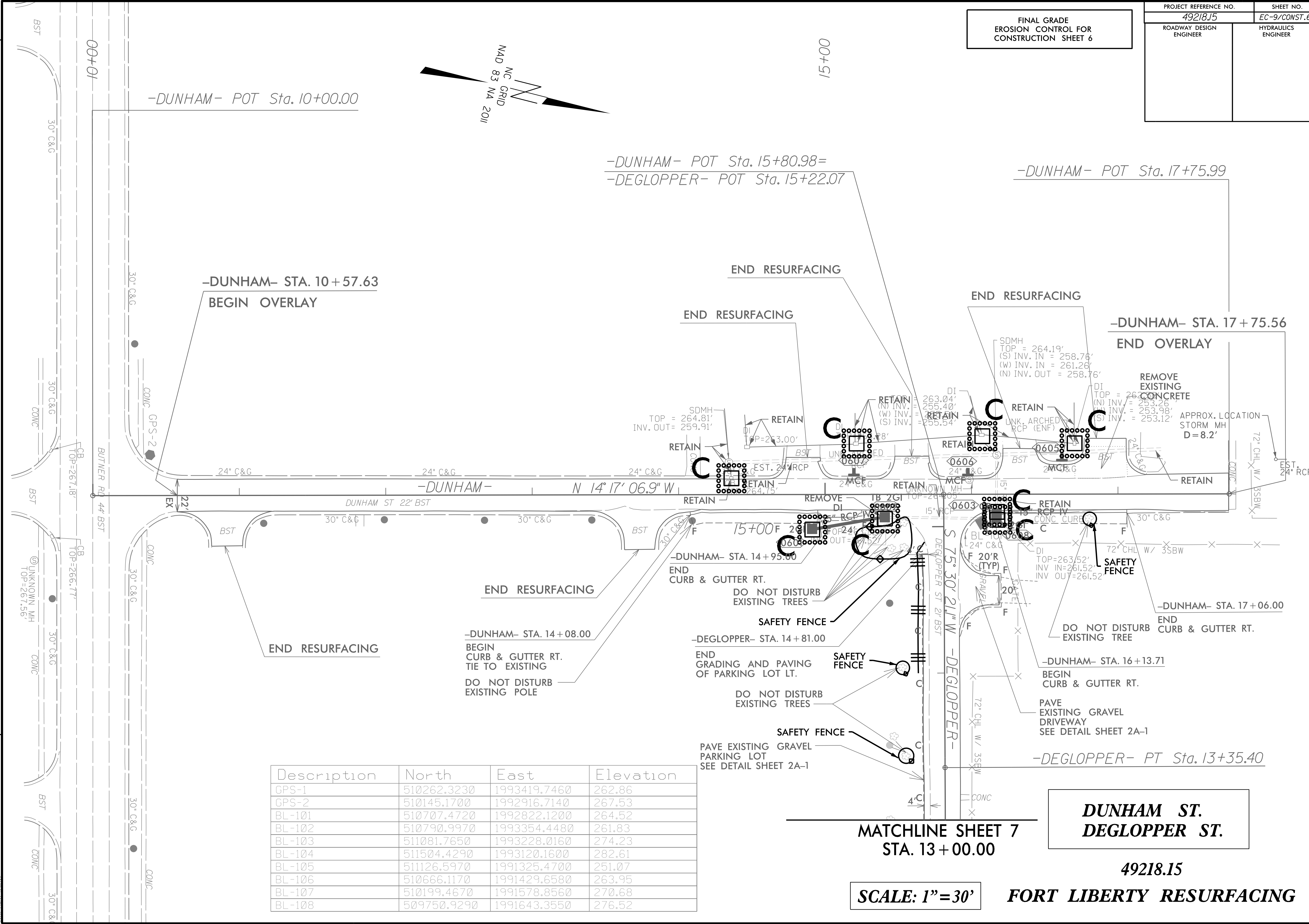
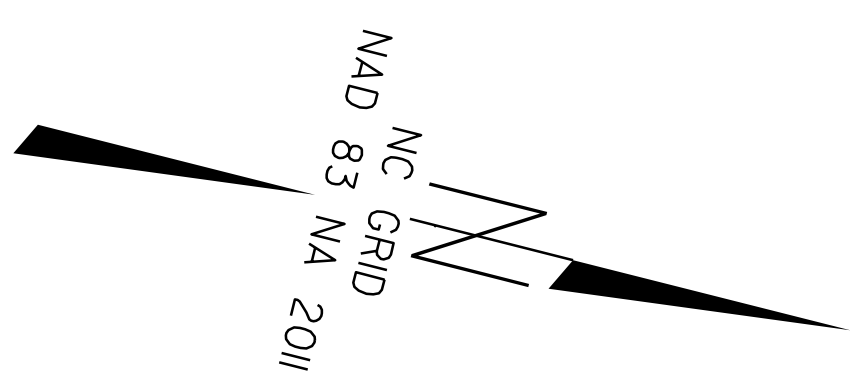
49218.15

FORT LIBERTY RESURFACING

MATCHLINE SHEET 7 STA. 18+00.00

5/1/2024
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FINAL GRADE
EROSION CONTROL FOR
CONSTRUCTION SHEET 6



Description	North	East	Elevation
GPS-1	510262.3230	1993419.7460	262.86
GPS-2	510145.1700	1992916.7140	267.53
BL-101	510707.4720	1992822.1200	264.52
BL-102	510790.9970	1993354.4480	261.83
BL-103	511081.7650	1993228.0160	274.23
BL-104	511504.4290	1993120.1600	282.61
BL-105	511126.5970	1991325.4700	251.07
BL-106	510666.1170	1991429.6580	263.95
BL-107	510199.4670	1991578.8560	270.68
BL-108	509750.9290	1991643.3550	276.52

MATCHLINE SHEET 7
STA. 13 + 00.00

**DUNHAM ST.
DEGLOPPER ST.**

49218.15

SCALE: 1" = 30'

FORT LIBERTY RESURFACING

8/17/99
5/28/2024
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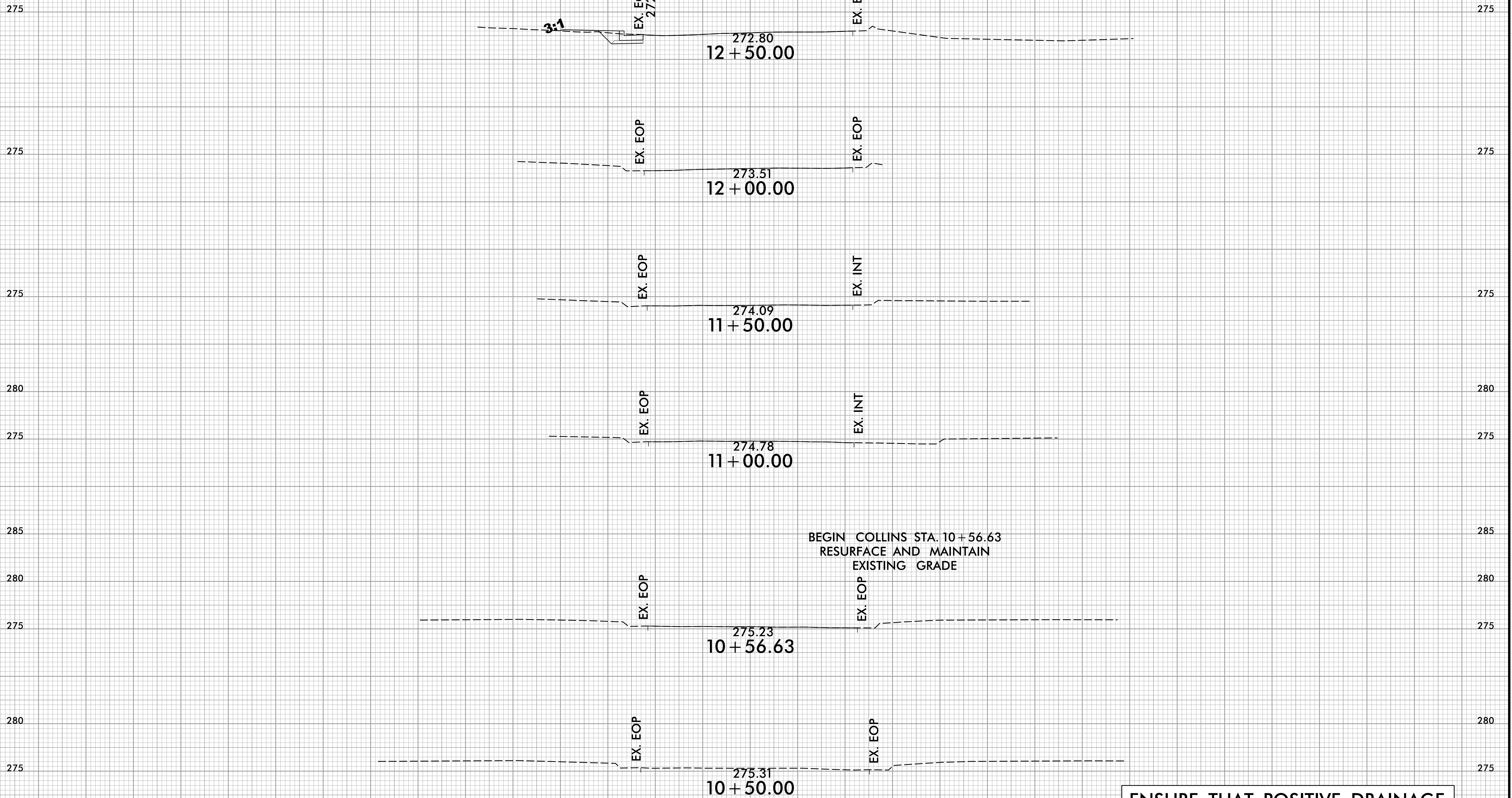
8/23/99



PROJ. REFERENCE NO.
49218.9, 49218.15

SHEET NO.
X-1

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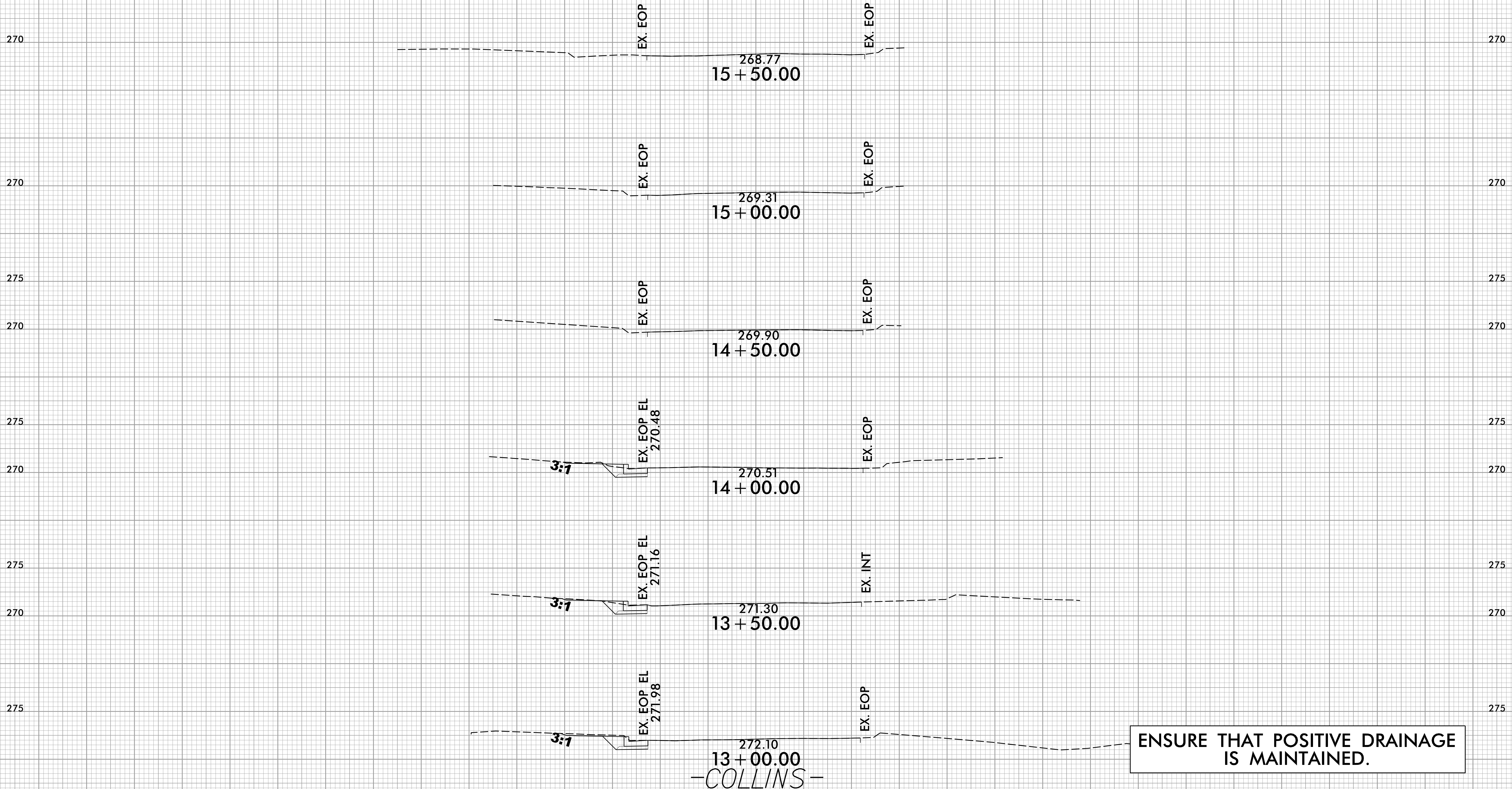
-COLLINS-

4/23/2024
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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

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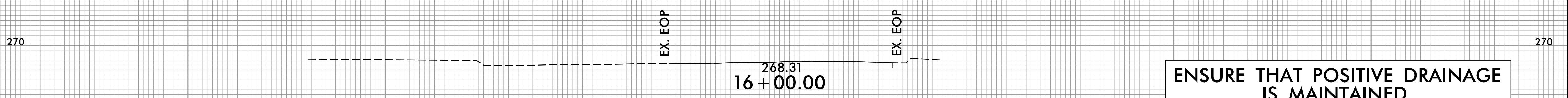
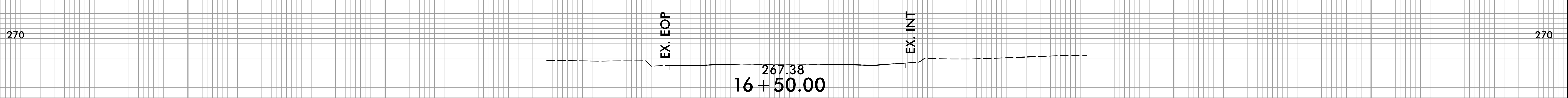
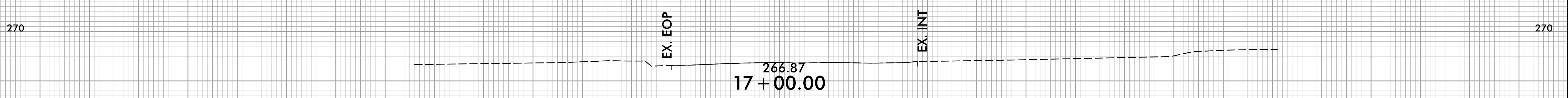
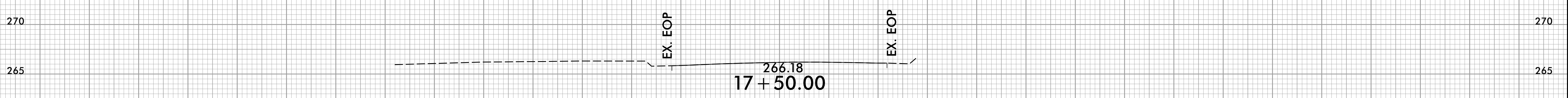
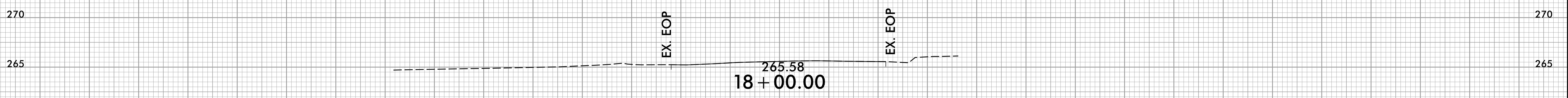
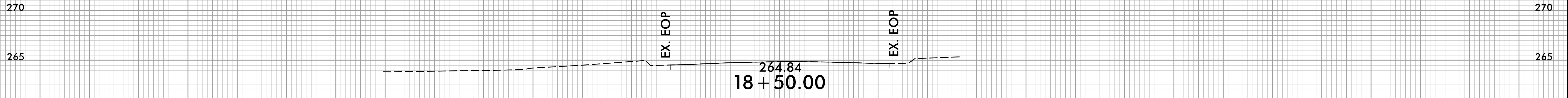
8/23/99



PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-3

PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-3

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-COLLINS-

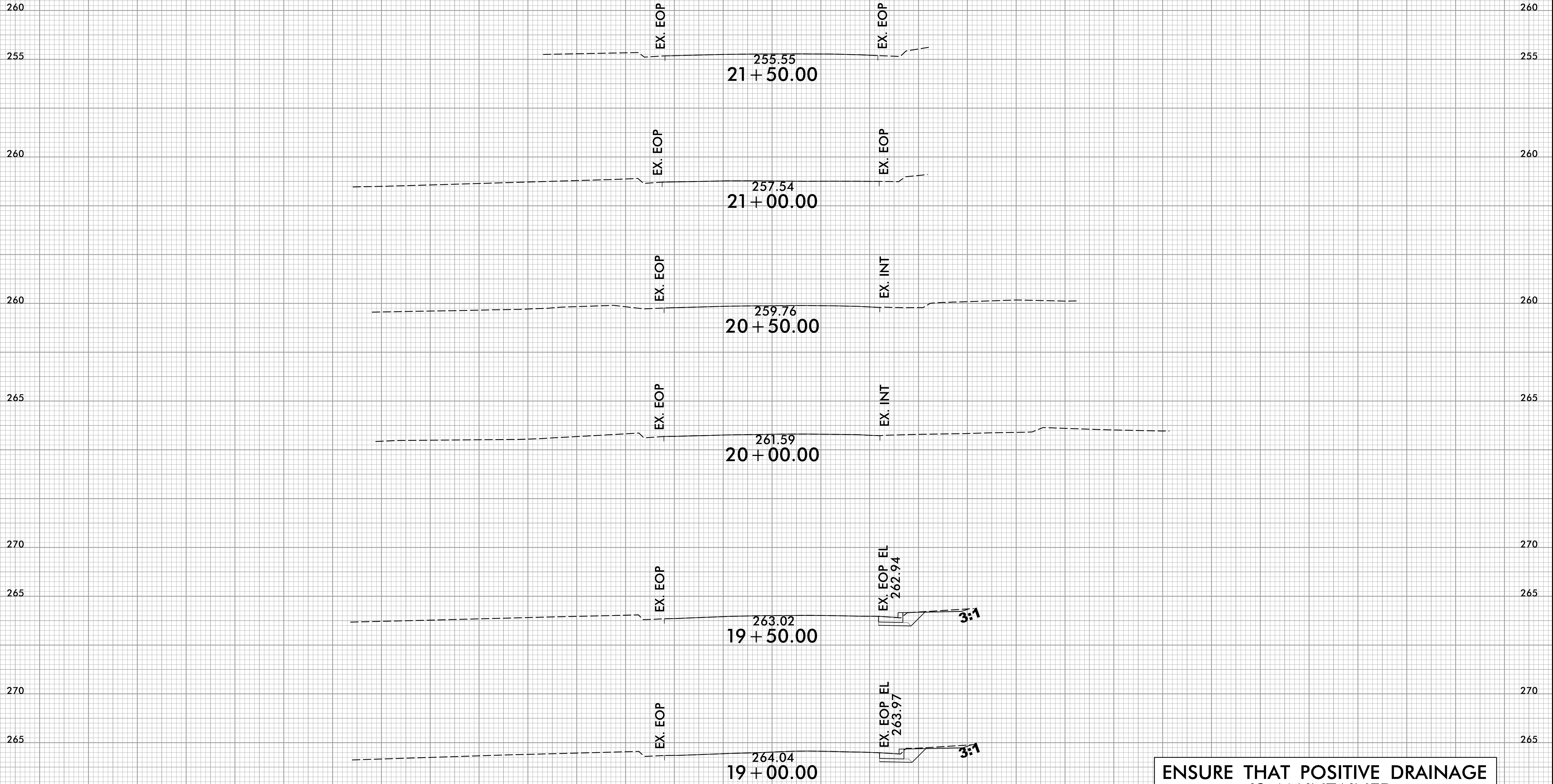
ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

4/23/2024
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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



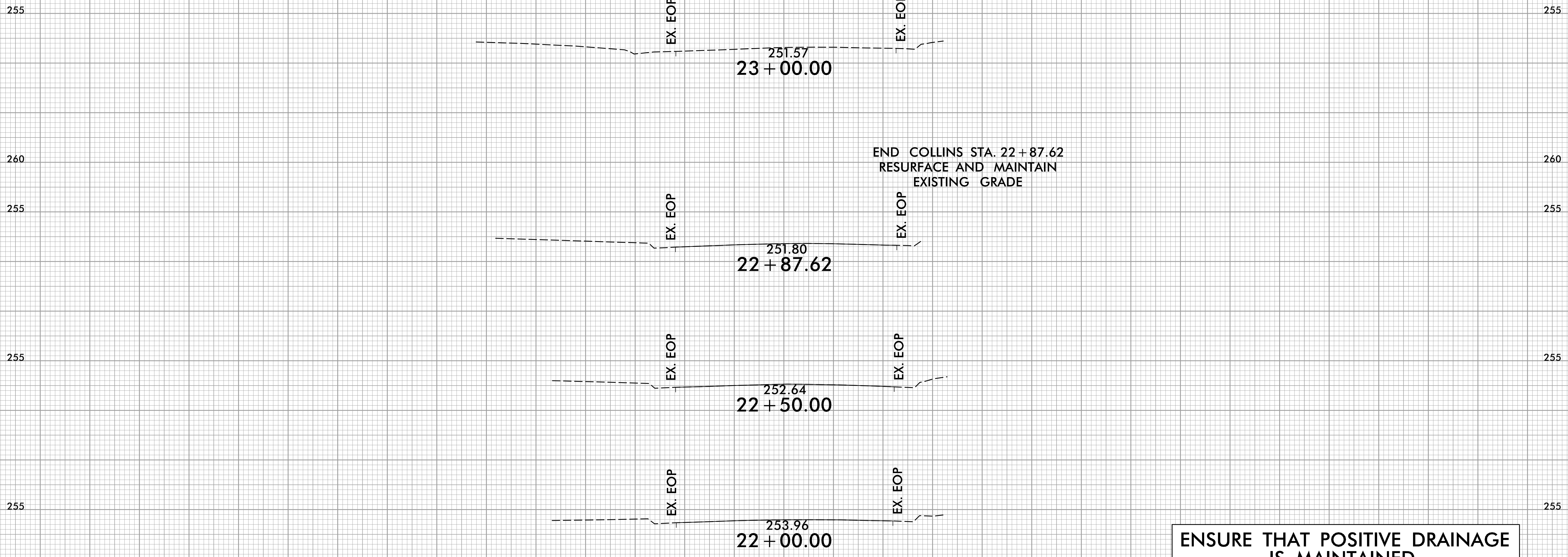
-COLLINS-

ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



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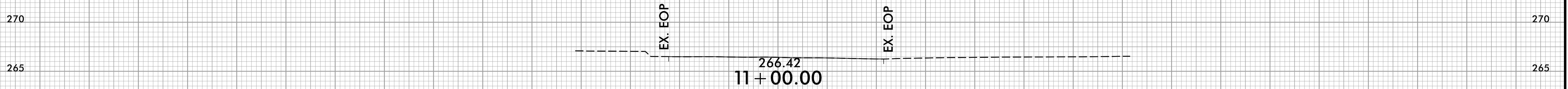
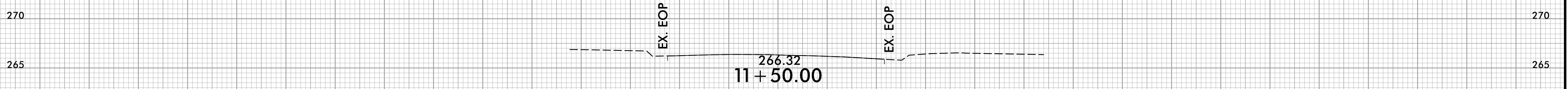
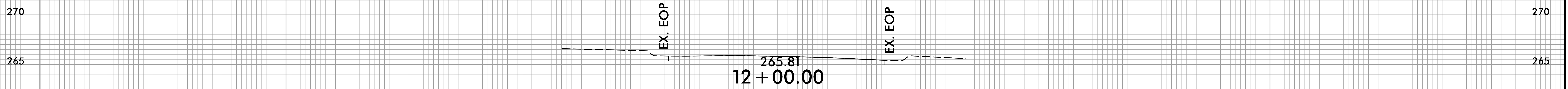
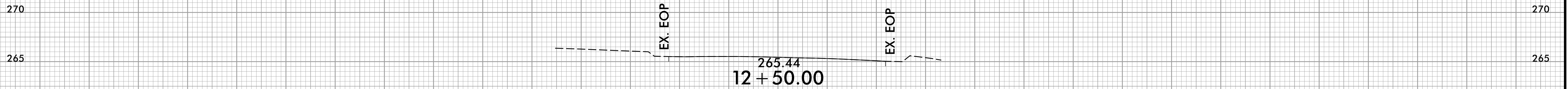
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ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

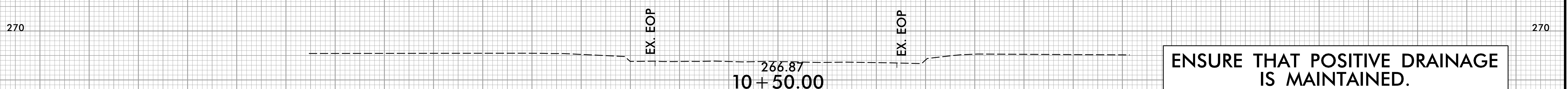
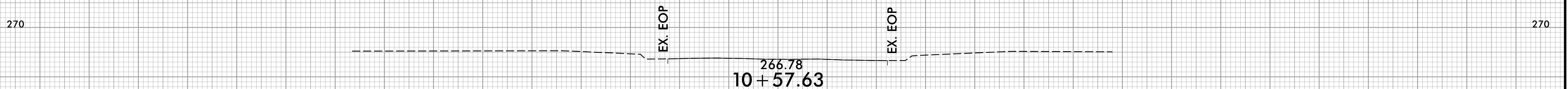
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BEGIN DUNHAM STA. 10+57.63
RESURFACE AND MAINTAIN
EXISTING GRADE

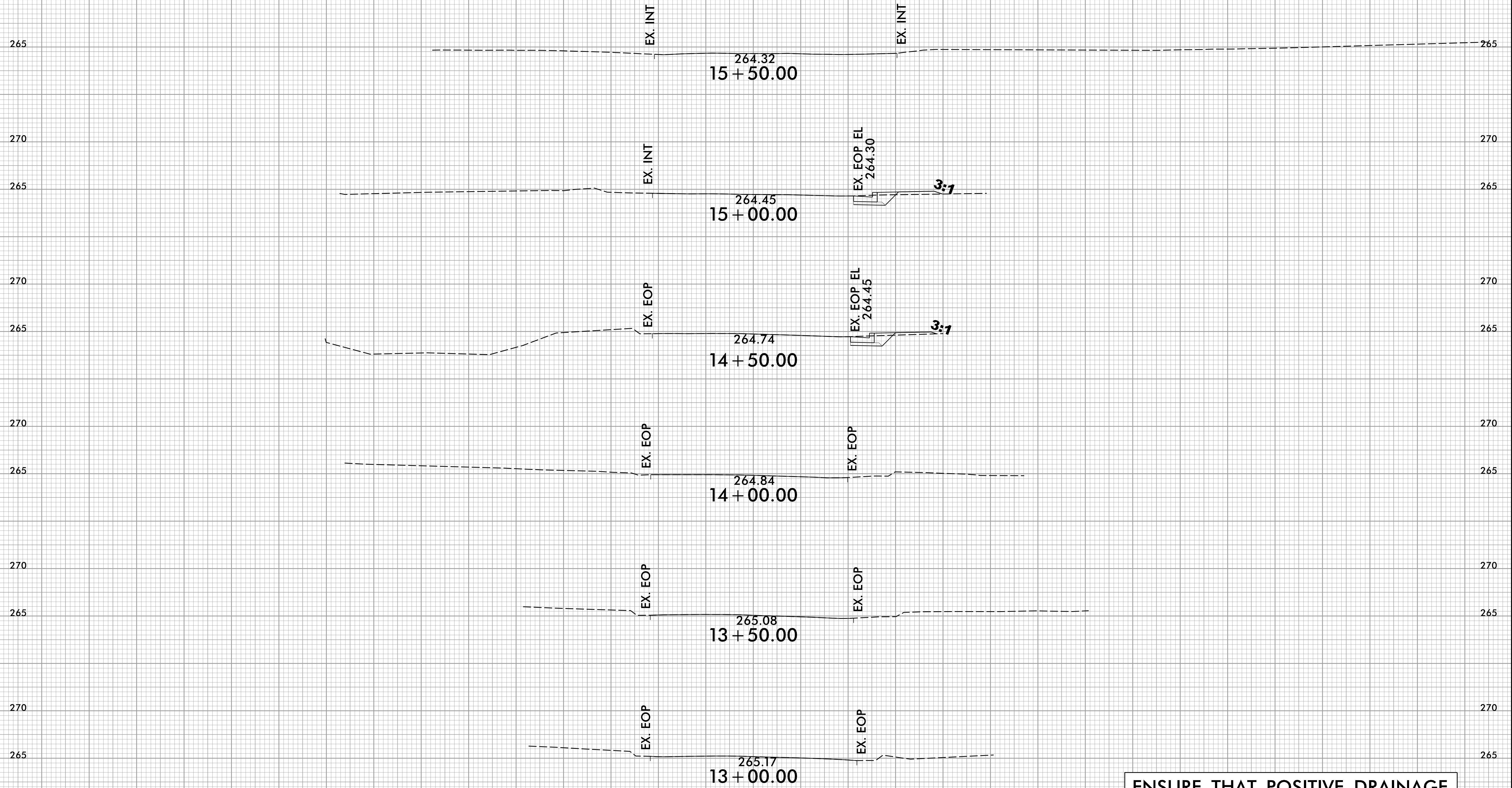


ENSURE THAT POSITIVE DRAINAGE
IS MAINTAINED.

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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



-DUNHAM-

ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

END DUNHAM STA. 17+75.56
RESURFACE AND MAINTAIN
EXISTING GRADE

EX. INT

EX. EOP

264.36
17+75.56

EX. INT

EX. EOP

264.43
17+50.00

EX. INT

EX. EOP EL
264.32

264.37
17+00.00

3:1

EX. EOP

EX. EOP EL
264.00

264.07
16+50.00

3:1

EX. EOP

EX. INT

264.00
16+00.00

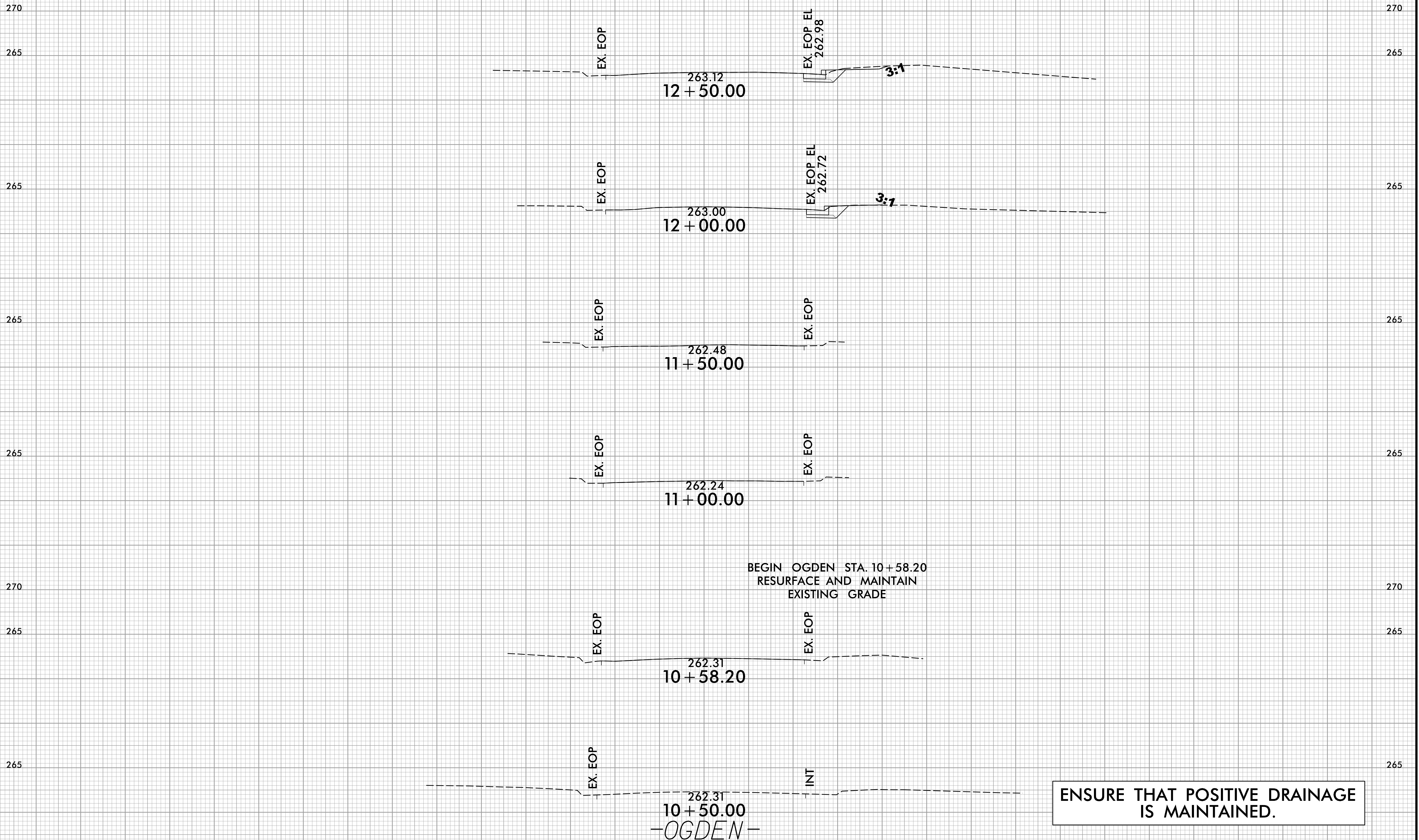
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ENSURE THAT POSITIVE DRAINAGE
IS MAINTAINED.

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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

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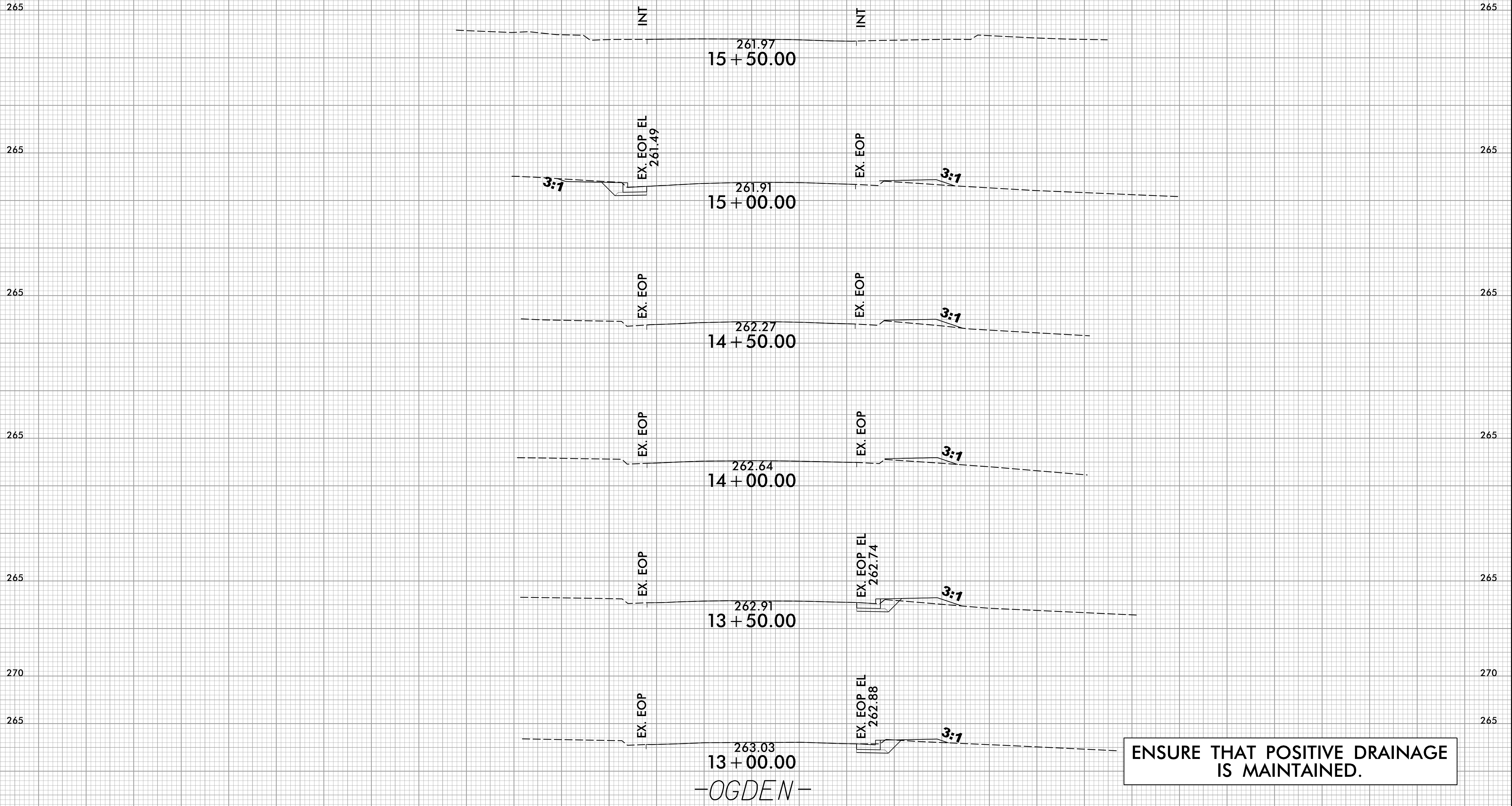
8/23/99



PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-10

PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-10

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—OGDEN—

ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

4/30/2024
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 jgden

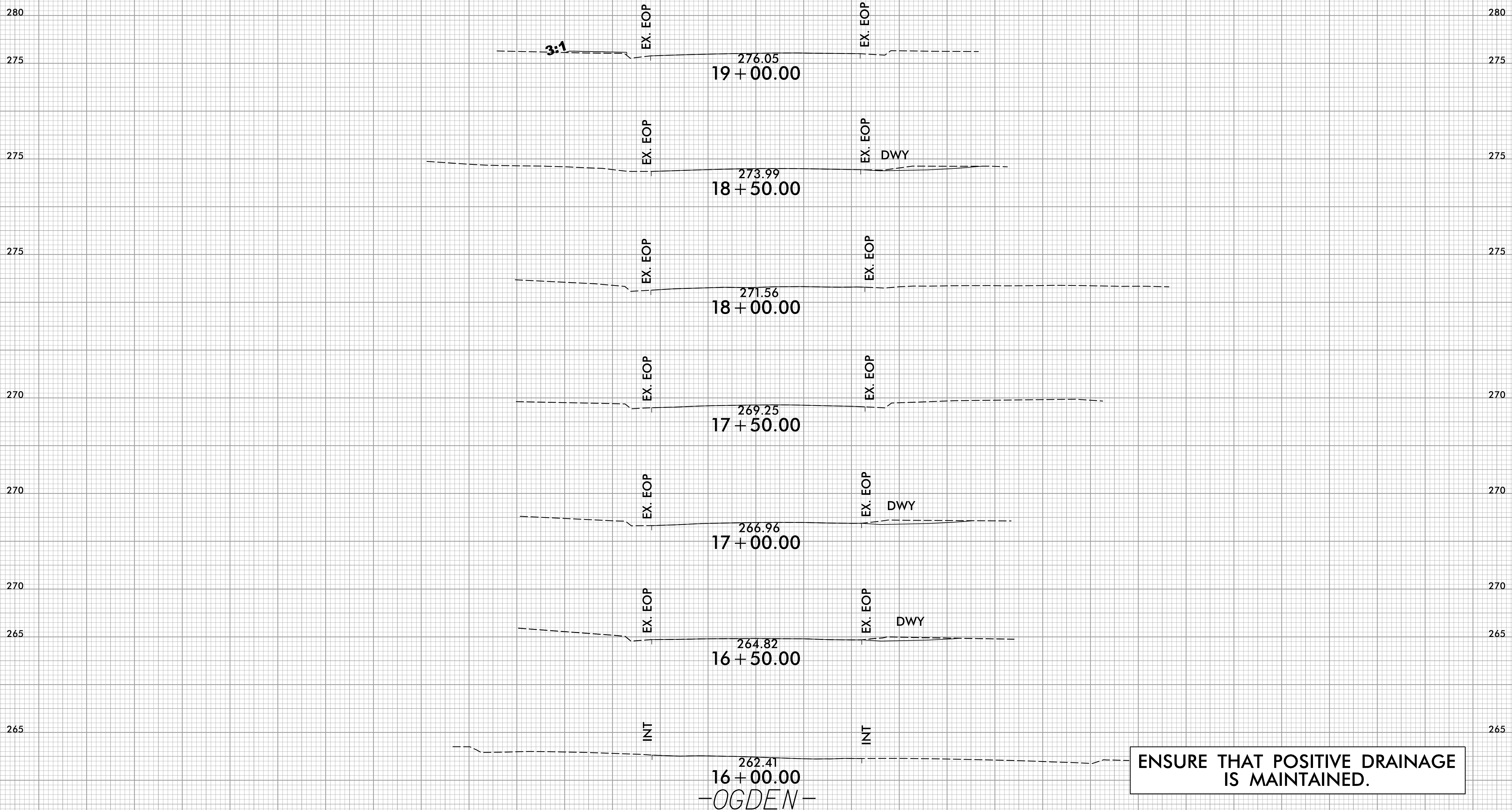
8/23/99



PROJ. REFERENCE NO.
49218.9, 49218.15

SHEET NO.
X-11

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ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

4/30/2024
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8/23/99



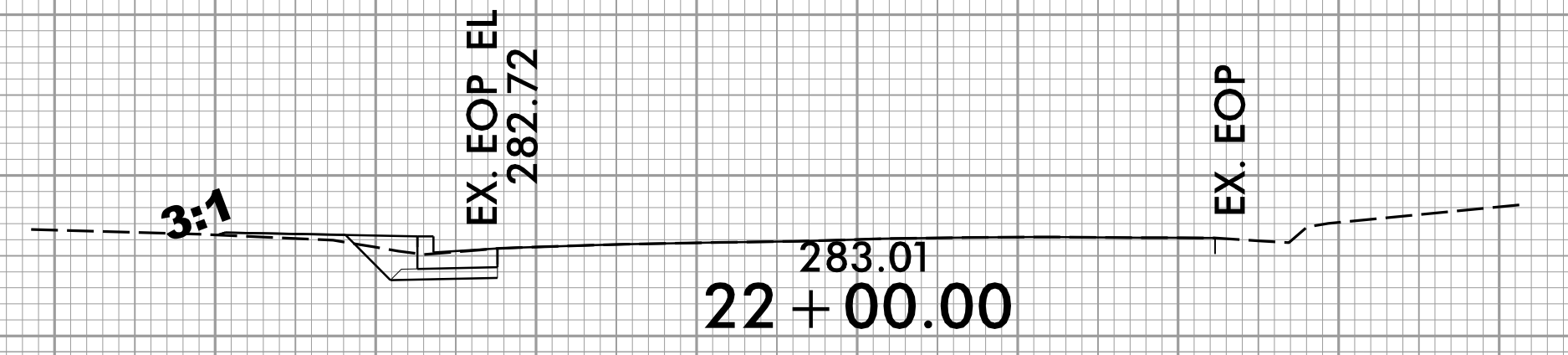
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49218.9, 49218.15	X-12

PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-12

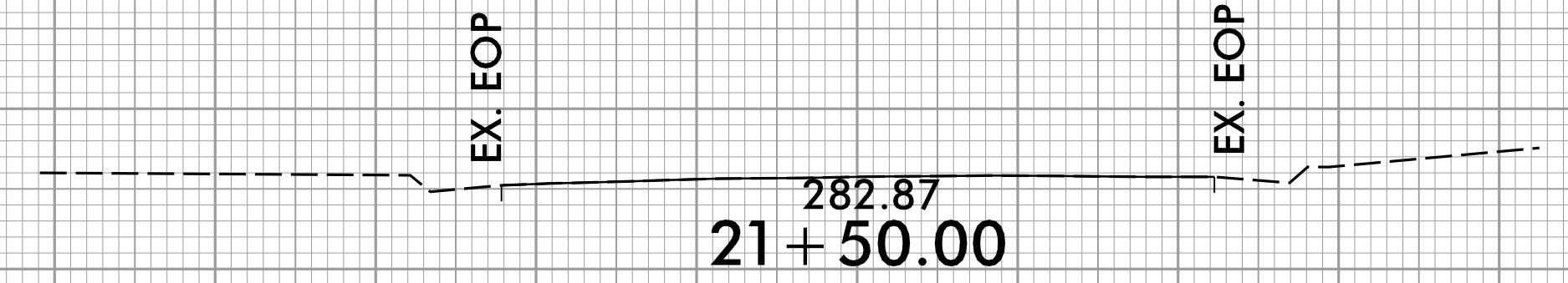
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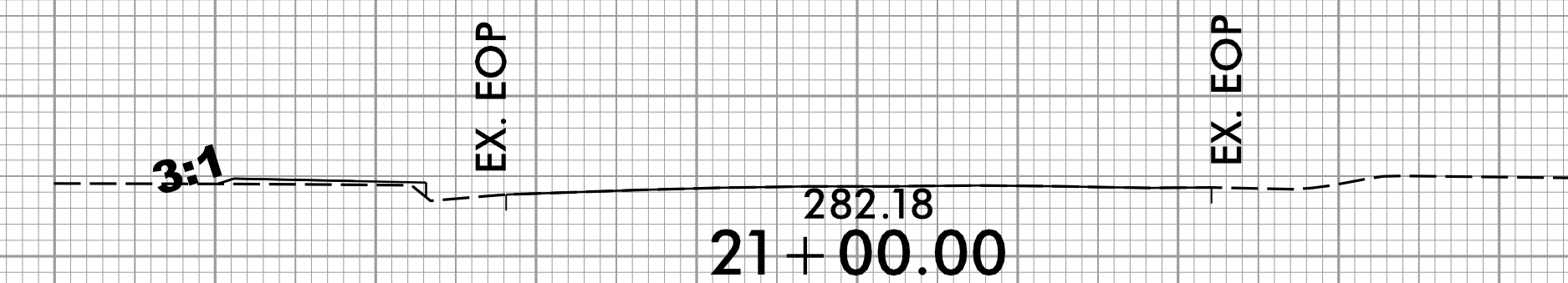
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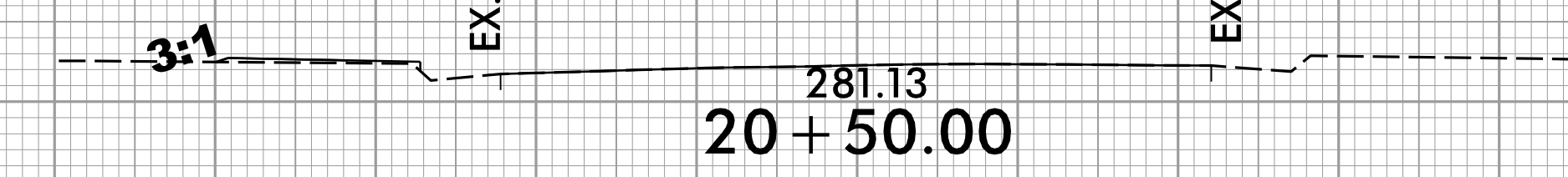


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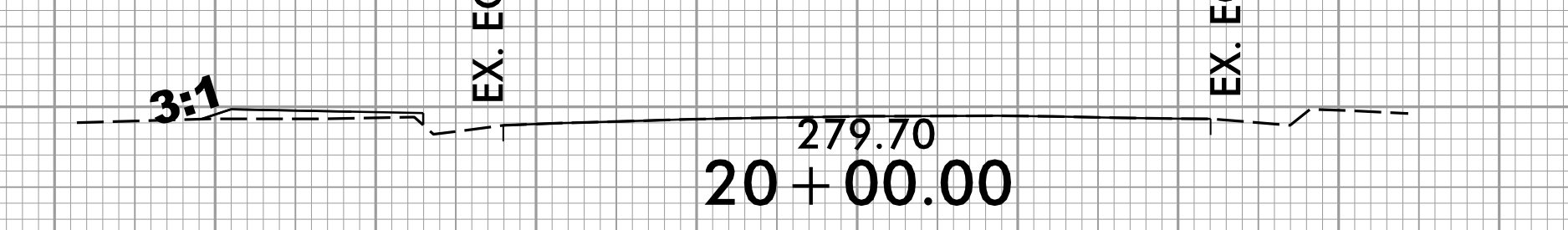
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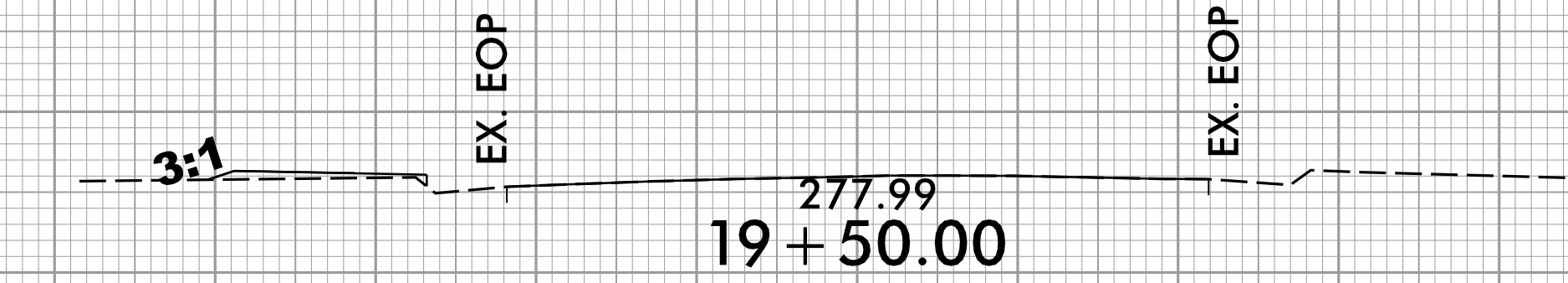


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280 280



-OGDEN-

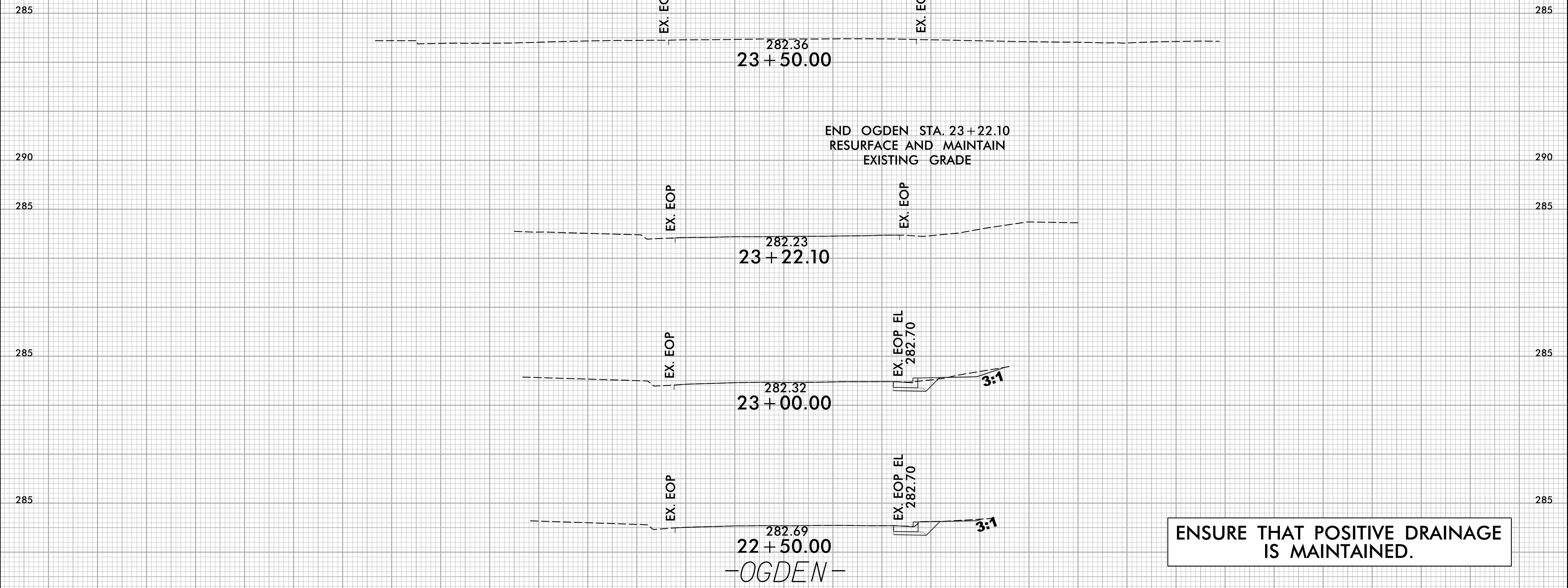
ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

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4/30/2024
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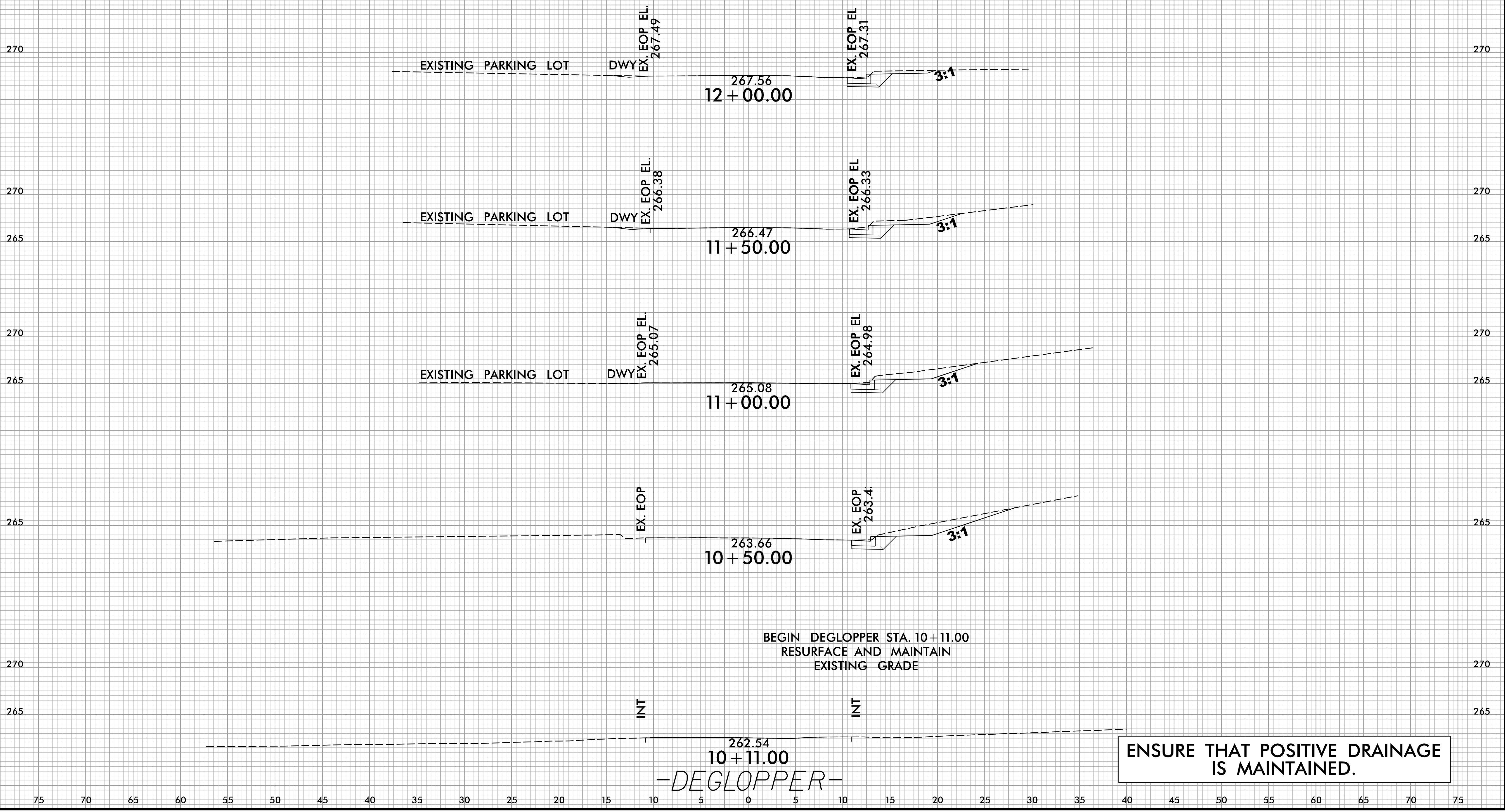
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8/23/99



PROJ. REFERENCE NO.	SHEET NO.
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ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

-DEGLOPPER-

5/13/2024
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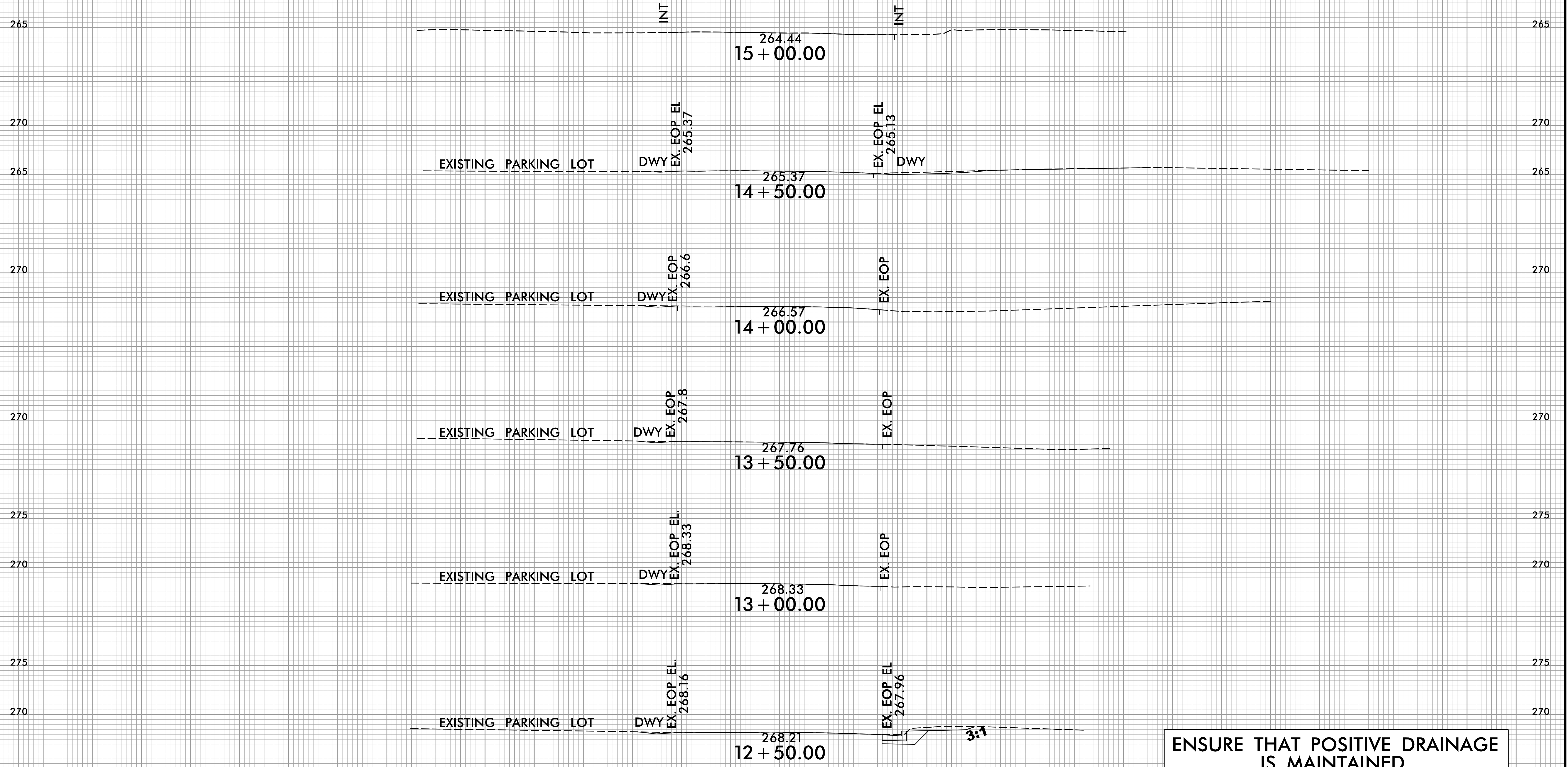
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PROJ. REFERENCE NO.
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SHEET NO.
X-15

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-DEGLOPPER-

ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED.

5/13/2024
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8/23/99



PROJ. REFERENCE NO.	SHEET NO.
49218.9, 49218.15	X-16

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270 270

265 265

END DEGLOPPER STA. 15+11.07
RESURFACE AND MAINTAIN
EXISTING GRADE

N

N

264.41
15+11.07

**ENSURE THAT POSITIVE DRAINAGE
IS MAINTAINED.**

-DEGLOPPER-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

5/2/2024
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