

Madison, Wisconsin

CITY OF MADISON

CITY ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS

PLAN OF PROPOSED IMPROVEMENT

HILL FARMS STATE OFFICE BUILDING - UNIVERSITY AVENUE INTERSECTION IMPROVEMENTS

PROJECT NO. 160114
CITY PROJECT NO. 45823

INDEX OF SHEETS

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TC1 - TC11	EROSION CONTROL PLANS
ES1 - ES4	REMOVALS AND EXISTING CONDITIONS
RM1 - RM4	STREETS PLAN & PROFILES
P1 - P5	STAKING DETAILS
ST1 - ST2	STORM SEWER & UTILITY SCHEDULES
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PUBLIC IMPROVEMENT PROJECT
APPROVED:

APRIL 18, 2017

BY THE COMMON COUNCIL
OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN
APPROVED BY:

[Signature] 5/4/17
City Engineer Date

STREET DESIGN & TRAFFIC CONTROL
DESIGNED BY:

WISCONSIN PROFESSIONAL ENGINEER
DANIEL J. COYLE
E-36578
RACINE WIS.
18 APR 17

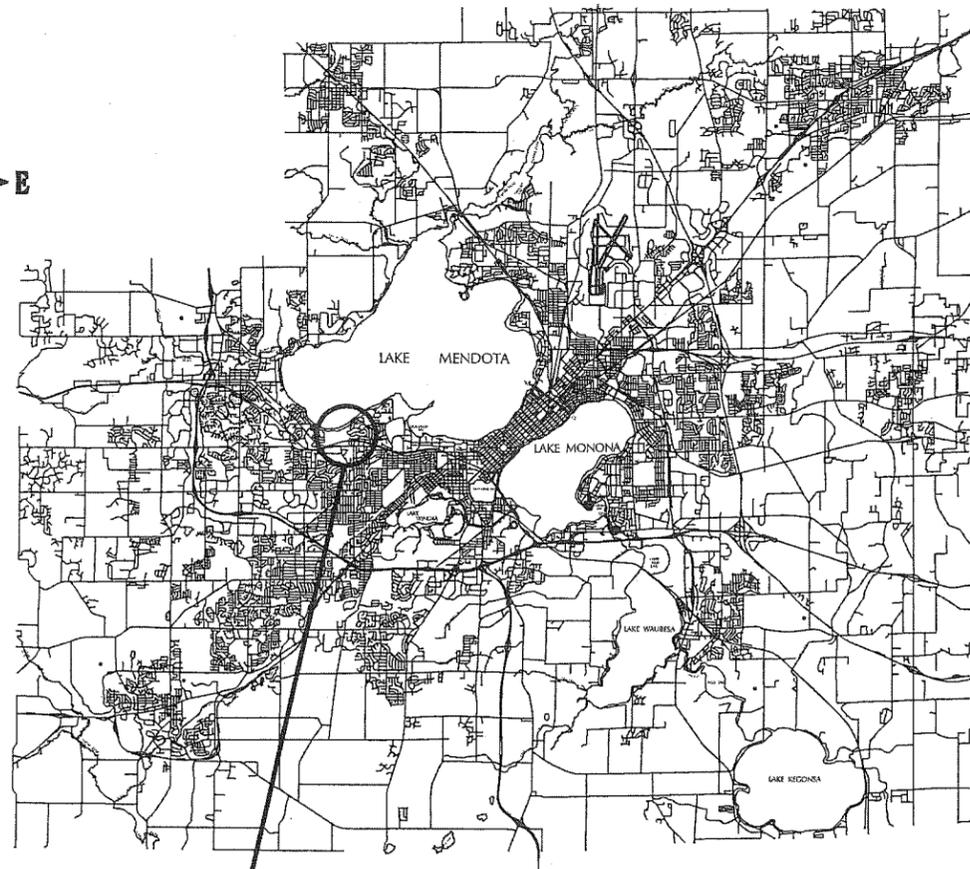
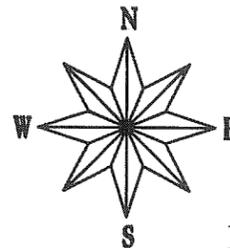
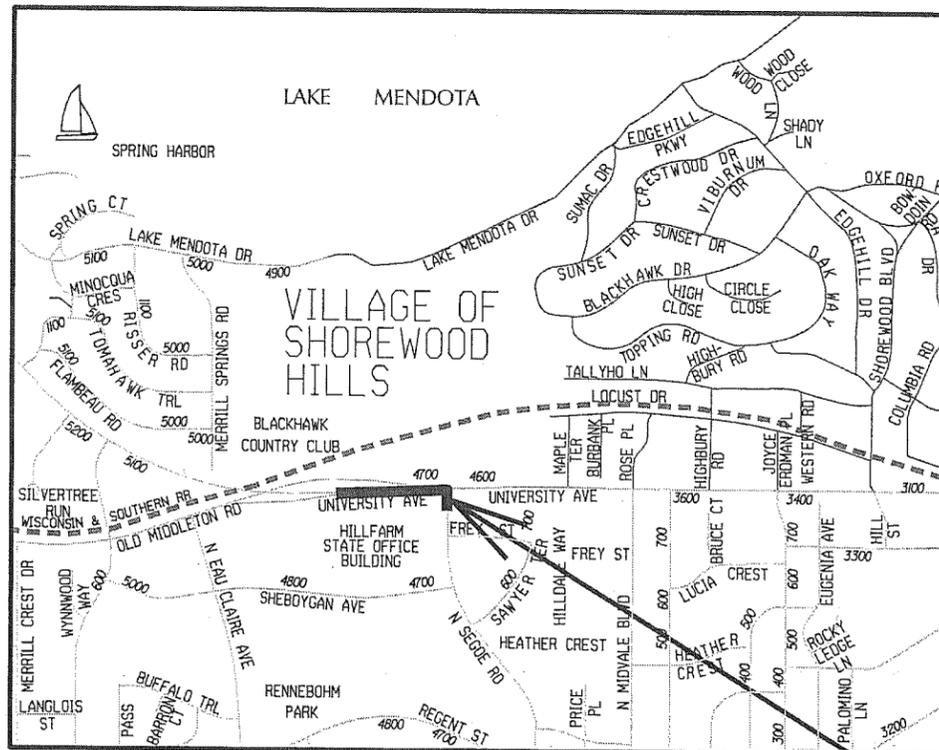
STORM SEWER
DESIGNED BY:

WISCONSIN PROFESSIONAL ENGINEER
DANIEL J. COYLE
E-36578
RACINE WIS.
18 APR 17

STREET LIGHTING & TRAFFIC SIGNALS
DESIGNED BY:

WISCONSIN PROFESSIONAL ENGINEER
BRANDON J. BOURDON
E-38510
ST. PAUL MN
04/18/17

PLOT SCALE: _____
REV. DATE: _____
ORIGINATOR: CITY OF MADISON, STREETS DIVISION



PROJECT
LOCATION

GENERAL CONSTRUCTION NOTES:

NO TREES IN THE RIGHT OF WAY OR ON PUBLIC LANDS SHALL BE TRIMMED, PRUNED, REMOVED OR ADVERSELY AFFECTED IN ANY WAY UNTIL THE CONTRACTOR HAS RECEIVED WRITTEN PERMISSION FROM THE CONSTRUCTION MANAGER OR CITY OF MADISON FORESTER. SAID WRITTEN PERMISSION SHALL INCLUDE LANGUAGE INDICATING THAT SECTION 10.101 OF THE MADISON GENERAL ORDINANCES AND ADMINISTRATIVE PROCEDURE MEMORANDUM NO. 6-2, REFERRING TO NOTIFICATION OF PROPERTY OCCUPANTS AND/OR OWNERS, HAS BEEN COMPLIED WITH.

THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CONSTRUCTION MANAGER AND CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT A MINIMUM OF 10 WORKING DAYS PRIOR TO THE ANTICIPATED START OF WORK DATE ON THE PROJECT. THE CONTRACTOR NOT SHALL BEGIN WORK UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED BY THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT. SEE TC SHEETS FOR ADDITIONAL TRAFFIC CONTROL INFORMATION.

ALL GUTTERS SHALL DRAIN WITH A MINIMUM GRADE OF 0.5% TOWARD STORM SEWER INLETS.

CURB STATION AND OFFSETS SHALL BE TO THE FACE OF CURB UNLESS OTHERWISE INDICATED. CURB ELEVATIONS SHALL BE TO THE TOP OF CURB UNLESS OTHERWISE INDICATED.

POWER POLES AND OTHER OBSTRUCTIONS SHALL BE MOVED TO PROVIDE 2 FEET MINIMUM OF CLEAR DISTANCE FROM ANY FACE OF CURB.

THERE MAY BE EXISTING UTILITIES OR OTHER FEATURES WHICH ARE EITHER NOT SHOWN OR SHOWN INCORRECTLY ON THIS PLAN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND IDENTIFY ALL UTILITIES AND TOPOGRAPHY WHICH MAY AFFECT THE CONSTRUCTION OF THESE IMPROVEMENTS. SEE SHEET U-2 FOR ADDITIONAL UTILITY INFORMATION.

ALL PERMANENT SIGNING, PRECAST SIGN POST BASE, AND SIGN POST PIPE INSERT LOCATIONS SHALL BE VERIFIED BY THE CONSTRUCTION MANAGER AND CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT PRIOR TO PLACEMENT BY THE CONTRACTOR.

THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL BARRICADES, SIGNING, AND TRAFFIC CONTROL, AS REQUIRED IN THE PLANS, BY THE CONSTRUCTION MANAGER, AND BY THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.

PAVEMENT SAWCUTS SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER. SAWCUTS SHOWN ON THE PLAN ARE APPROXIMATE.

EARTHWORK SUMMARY AND SCHEDULE

WB University Avenue

STATION	CUT VOLUME	CUMULATIVE CUT	FILL VOLUME	SELECT FILL VOLUME	CUMULATIVE SELECT FILL	CUMULATIVE FILL
189+87.89						
189+88.00	0	0	0			0
190+00.00	9	9	0			0
190+50.00	52	61	0	2	2	0
190+51.56	2	63		0	2	0
191+00.00	68	130		4	6	0
191+34.69	81	211	1	4	10	1
191+40.26	18	229	0	1	11	1
191+50.00	43	273	3	2	13	4
192+05.00	318	591	48	26	39	52
192+50.00	269	860	75	39	78	127
193+00.00	327	1187	104	61	139	230
193+50.00	372	1559	108	76	214	338
194+00.00	396	1955	107	89	303	446
194+25.00	205	2160	52	49	353	498
194+52.34	220	2380	55	58	411	553
195+00.00	373	2754	90	111	522	643
195+32.74	257	3011	55	80	602	698
195+50.00	135	3146	26	42	644	724
196+00.00	377	3523	60	113	757	783
196+13.14	96	3618	12	27	784	795
196+50.00	259	3877	25	66	850	820
197+00.00	354	4231	17	68	917	837
197+50.00	350	4581	5	47	964	842
198+00.00	296	4878	0	25	990	842
198+50.00	237	5114		8	998	842
199+00.00	210	5325		4	1002	842
199+50.00	158	5483		4	1005	842
200+00.00	109	5592		4	1009	842
200+14.70	36	5628	13	1	1010	855
200+50.00	95	5723	46	3	1013	901
200+64.70	37	5760	9	1	1014	910
200+68.70	10	5770	1	0	1014	911
200+77.70	21	5791	2	1	1015	913
201+00.00	44	5835	1	2	1016	914
201+33.75	50	5885		3	1019	914
201+33.86	0	5885		0	1019	914

NB Segoe Road

STATION	CUT VOLUME	CUMULATIVE CUT	FILL VOLUME	SELECT FILL VOLUME	CUMULATIVE SELECT FILL	CUMULATIVE FILL
200+75.25						
200+91.00	71	71				
201+08.19	72	143				
201+50.00	72	215				
202+00.00	75	290				
202+28.50	67	358				
202+39.12	70	428				

Project Total

Bid Item	Bid Description	Unit	Quantity
20101	EXCAVATION CUT	C.Y.	6313
20205	SELECT FILL	TON	2038
40321	UNDERCUT	C.Y.	500

- EXCAVATION VOLUMES BY STATION INCLUDE REMOVAL VOLUME OF EXISTING PAVEMENTS, CURB AND GUTTER, AND TOPSOIL.

- BASIS OF QUANTITY: 2 TONS PER C.Y. OF SELECT FILL

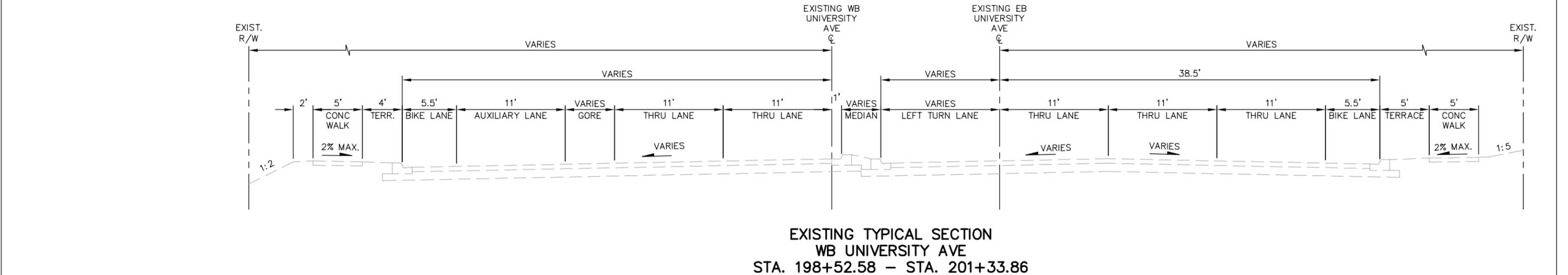
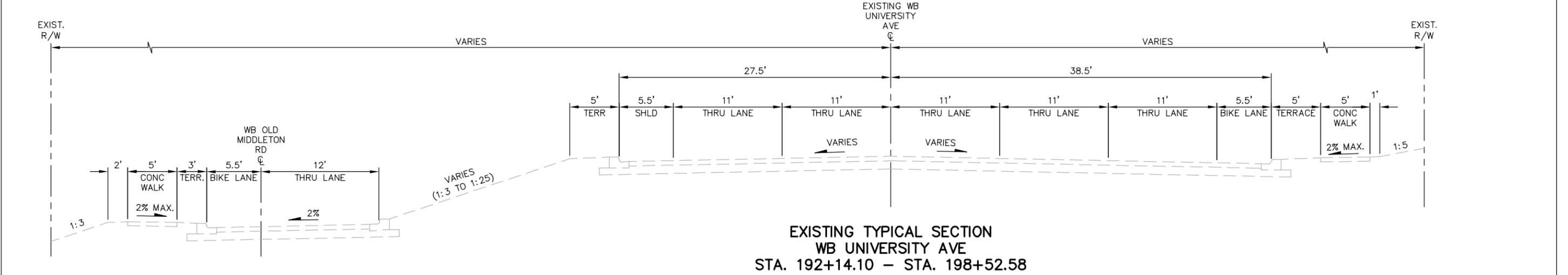
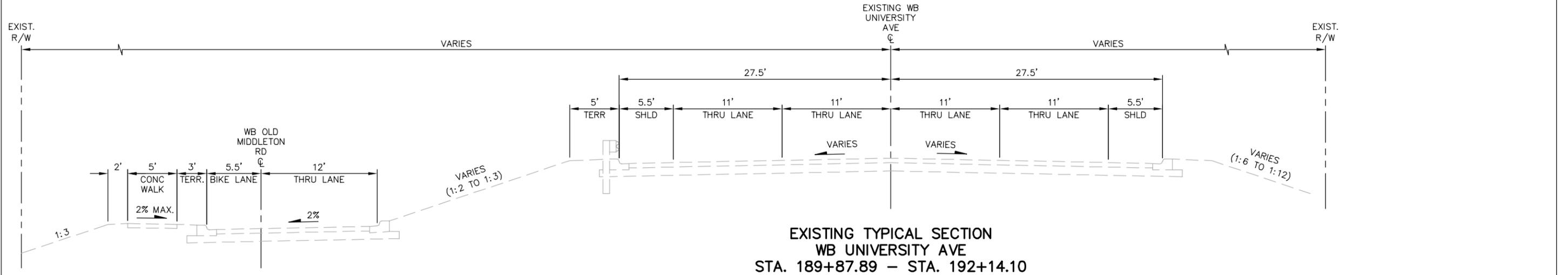
- THE CONTRACTOR SHALL CONFIRM LOCATIONS OF UNDERCUT WITH THE CONSTRUCTION MANAGER PRIOR TO EXCAVATION FOR AREAS WHERE THE SUBGRADE CANT BE COMPACTED TO SPECIFICATION. NO PAYMENT SHALL BE MADE FOR UNDERCUT UNLESS THE CONTRACTOR IS DIRECTED TO PERFORM THE WORK.

PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

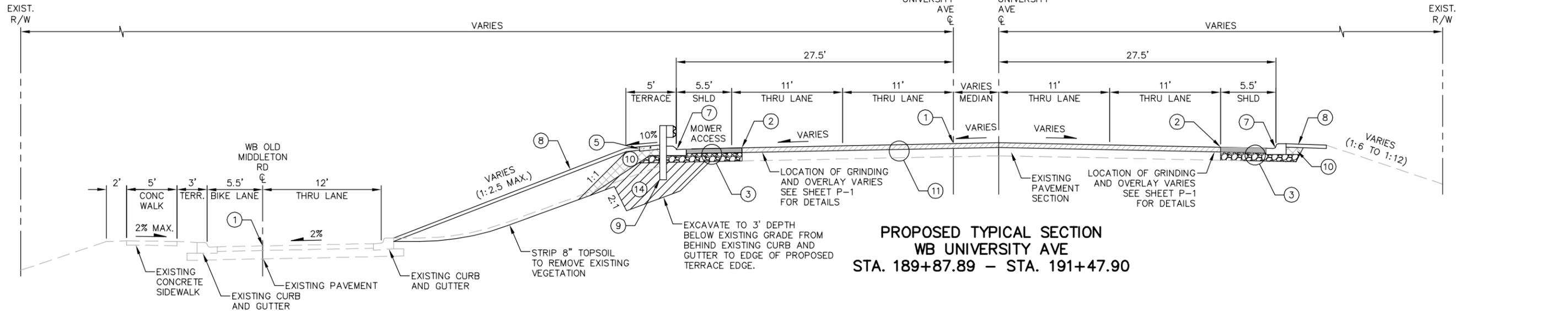


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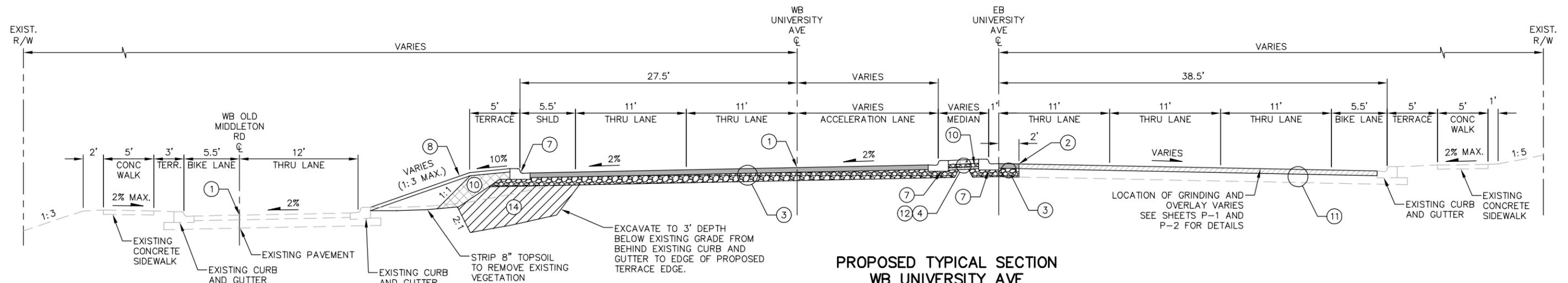
PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

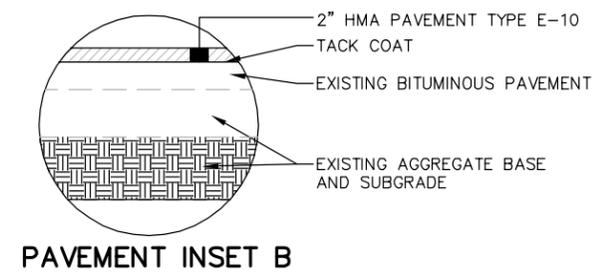
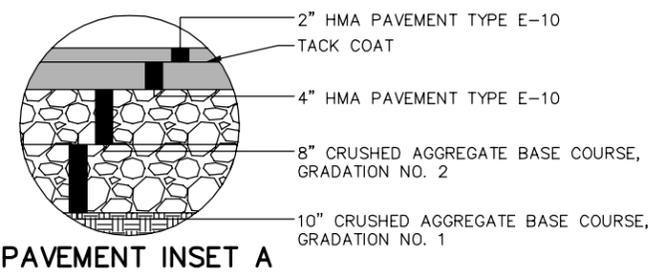


**PROPOSED TYPICAL SECTION
WB UNIVERSITY AVE
STA. 189+87.89 – STA. 191+47.90**

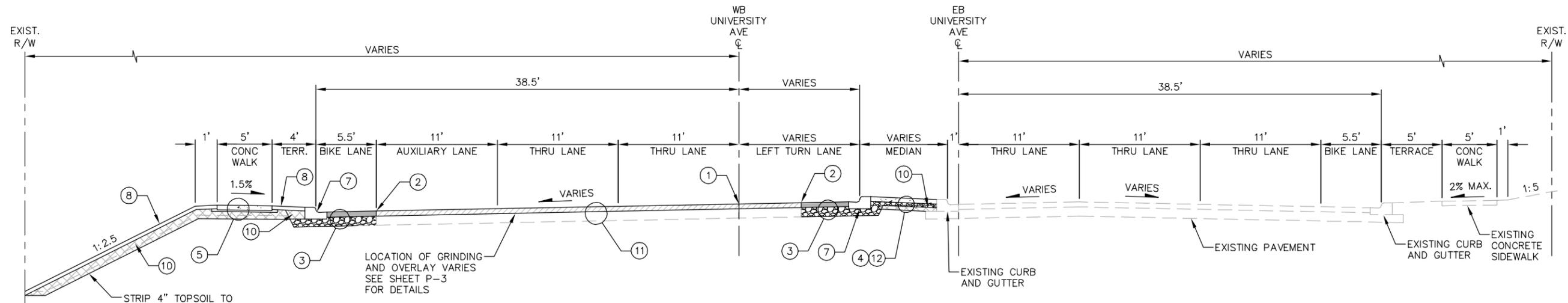
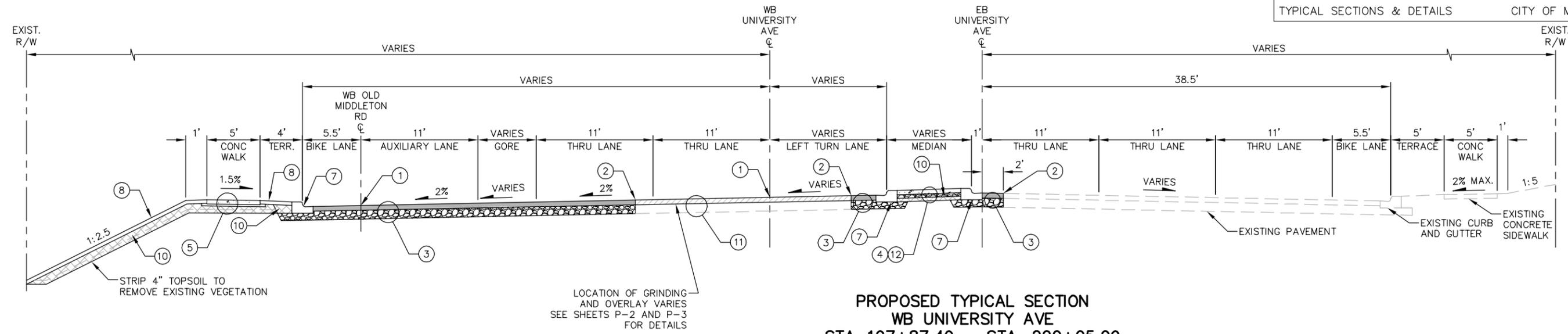


**PROPOSED TYPICAL SECTION
WB UNIVERSITY AVE
STA. 191+47.90 – STA. 197+87.49**

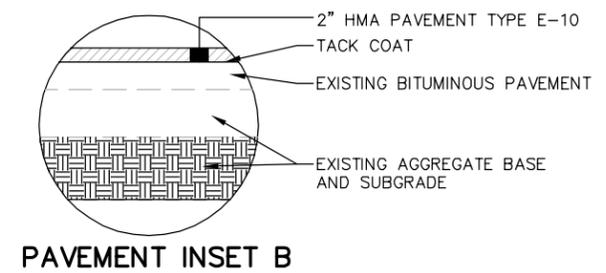
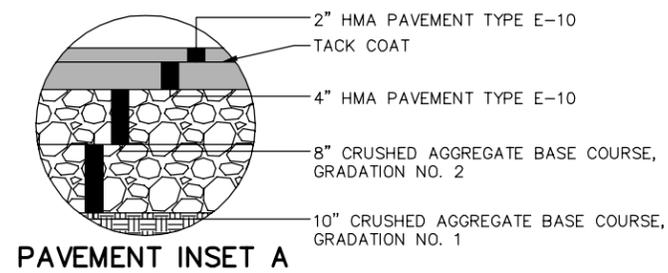
- ① POINT REFERRED TO ON PROFILE
- ② SAWCUT BITUMINOUS PAVEMENT, FULL DEPTH
- ③ HMA PAVEMENT PER PAVEMENT INSET A
- ④ ARCHITECTURAL CONCRETE PAVEMENT 5-INCH, 4" CRUSHED AGGREGATE BASE COURSE, GRADATION NO. 2
- ⑤ 5 INCH CONCRETE SIDEWALK, 2" SELECT FILL
- ⑥ INTENTIONALLY LEFT BLANK
- ⑦ TYPE "H" CONCRETE CURB & GUTTER
- ⑧ 4" TOPSOIL, TERRACE SEEDING (SUN MIX) & EROSION MATTING, CLASS II TYPE C – ORGANIC
- ⑨ STEEL PLATE BEAM GUARD, CLASS "A". SEE SHEETS D-6 TO D-11 FOR DETAILS.
- ⑩ SUITABLE MATERIAL FOR FILL
- ⑪ HMA PAVEMENT PER PAVEMENT INSET B
- ⑫ 12" TOPSOIL, TERRACE SEEDING (SUN MIX) & EROSION MATTING, CLASS II TYPE C – ORGANIC. SEE SHEETS ES-1 TO ES-4 FOR LOCATION.
- ⑬ TYPE "A" CONCRETE CURB & GUTTER
- ⑭ SELECT FILL



PLOT SCALE: _____ PLOT NAME: _____ REV. DATE: _____ ORIGINATOR: KIMLEY HORN AND ASSOCIATES



- ① POINT REFERRED TO ON PROFILE
- ② SAWCUT BITUMINOUS PAVEMENT, FULL DEPTH
- ③ HMA PAVEMENT PER PAVEMENT INSET A
- ④ ARCHITECTURAL CONCRETE PAVEMENT 5-INCH, 4" CRUSHED AGGREGATE BASE COURSE, GRADATION NO. 2
- ⑤ 5 INCH CONCRETE SIDEWALK, 2" SELECT FILL
- ⑥ INTENTIONALLY LEFT BLANK
- ⑦ TYPE "H" CONCRETE CURB & GUTTER
- ⑧ 4" TOPSOIL, TERRACE SEEDING (SUN MIX) & EROSION MATTING, CLASS II TYPE C – ORGANIC
- ⑨ STEEL PLATE BEAM GUARD, CLASS "A". SEE SHEETS D-6 TO D-11 FOR DETAILS.
- ⑩ SUITABLE MATERIAL FOR FILL
- ⑪ HMA PAVEMENT PER PAVEMENT INSET B
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- ⑬ TYPE "A" CONCRETE CURB & GUTTER
- ⑭ SELECT FILL

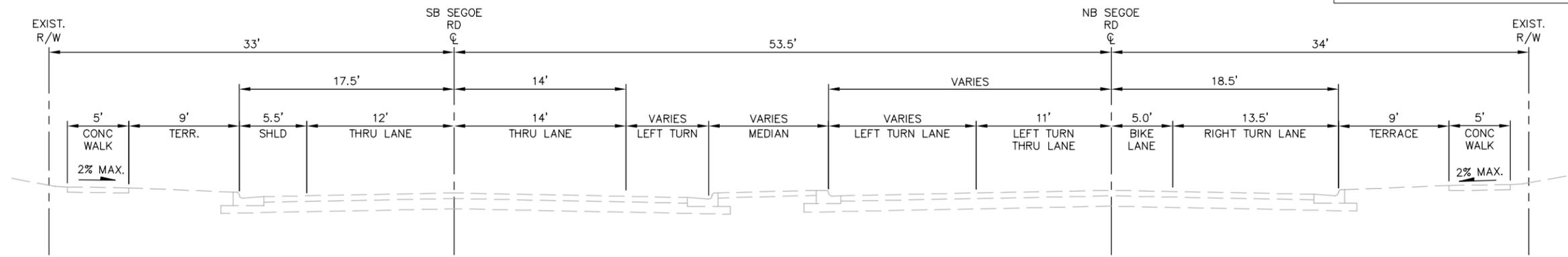


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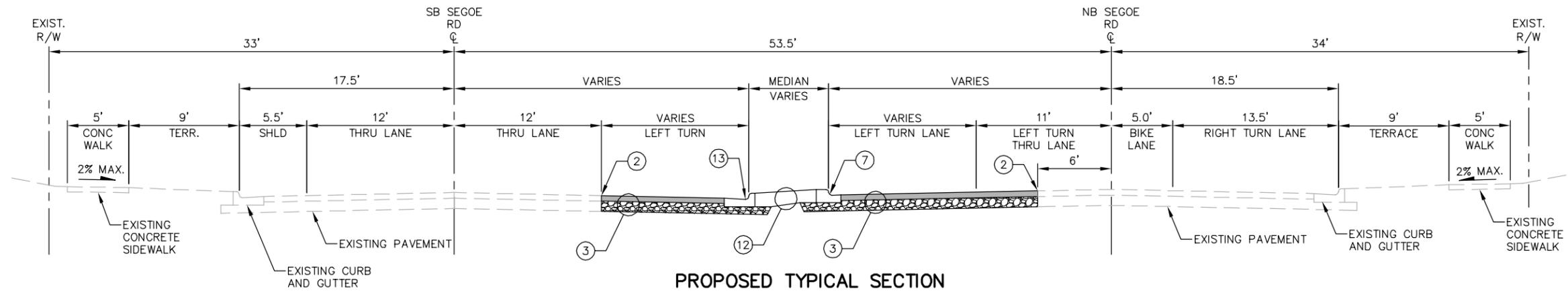
PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

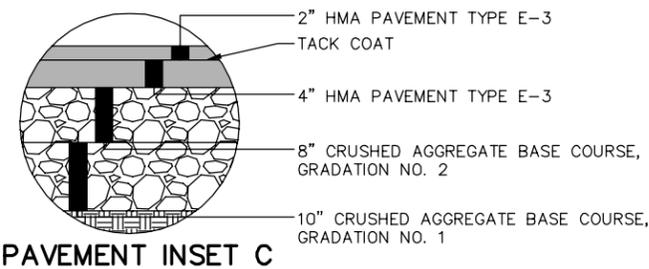


EXISTING TYPICAL SECTION
NB SEGOE RD
STA. 200+75.25 - STA. 202+39.12



PROPOSED TYPICAL SECTION
NB SEGOE RD
STA. 200+72.25 - STA. 202+39.12

- ① POINT REFERRED TO ON PROFILE
- ② SAWCUT BITUMINOUS PAVEMENT, FULL DEPTH
- ③ HMA PAVEMENT PER PAVEMENT INSET C
- ④ ARCHITECTURAL CONCRETE PAVEMENT 5-INCH, 4" CRUSHED AGGREGATE BASE COURSE, GRADATION NO. 2
- ⑤ 5 INCH CONCRETE SIDEWALK, 2" SELECT FILL
- ⑥ INTENTIONALLY LEFT BLANK
- ⑦ TYPE "H" CONCRETE CURB & GUTTER
- ⑧ 4" TOPSOIL, TERRACE SEEDING (SUN MIX) & EROSION MATTING, CLASS II TYPE C - ORGANIC
- ⑨ STEEL PLATE BEAM GUARD, CLASS "A". SEE SHEETS D-6 TO D-11 FOR DETAILS.
- ⑩ SUITABLE MATERIAL FOR FILL
- ⑪ HMA PAVEMENT PER PAVEMENT INSET B
- ⑫ 12" TOPSOIL, TERRACE SEEDING (SUN MIX) & EROSION MATTING, CLASS II TYPE C - ORGANIC. SEE SHEETS ES-1 TO ES-4 FOR LOCATION.
- ⑬ TYPE "A" CONCRETE CURB & GUTTER
- ⑭ SELECT FILL



PAVEMENT INSET C

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



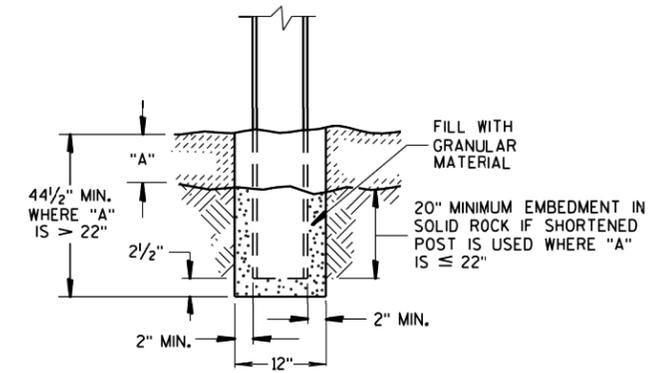
14B15 sheet a: Steel Plate Beam Guard, Class "A", Installation and Elements

GENERAL NOTES

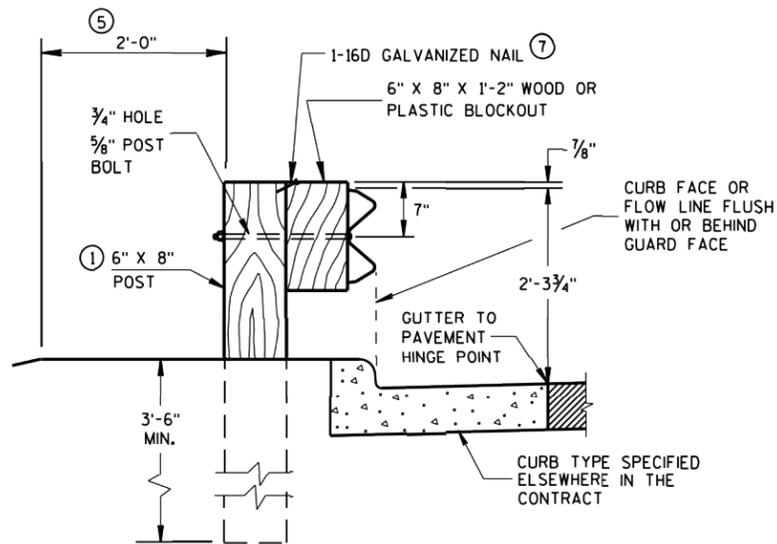
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, AND THE APPLICABLE SPECIAL PROVISIONS.

- ① W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
- ② USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
- ③ INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ④ USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- ⑤ IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- ⑥ IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
- ⑦ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

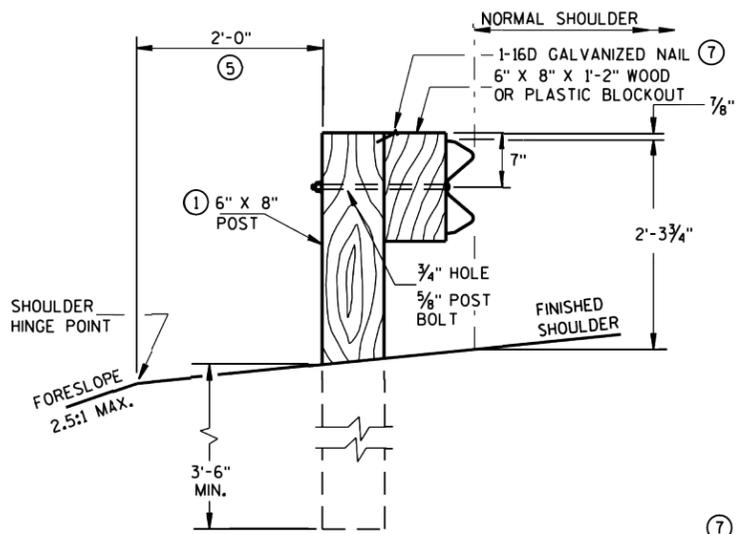
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



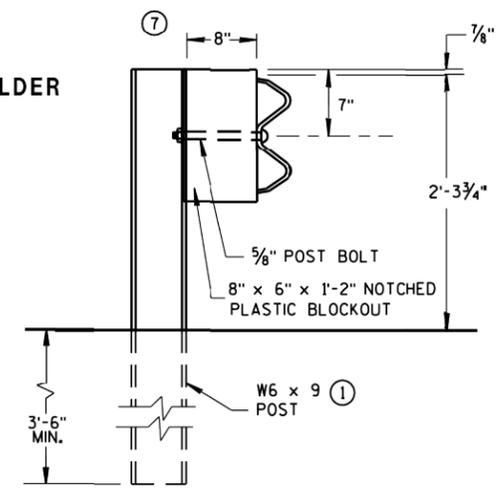
END VIEW SETTING STEEL OR WOOD POST IN ROCK ⑥



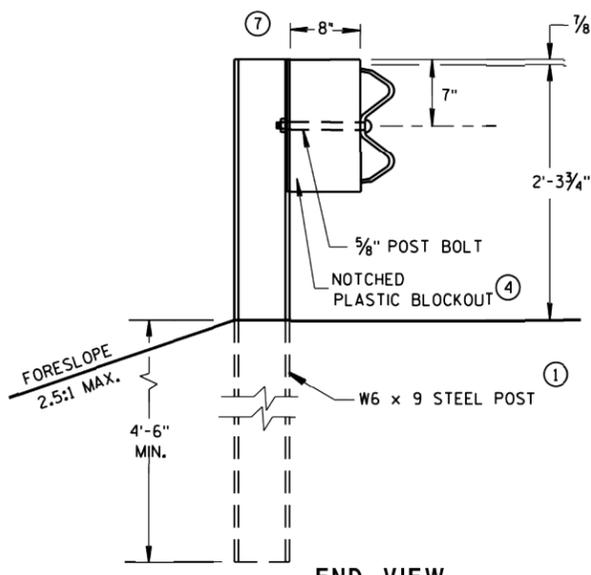
END VIEW LOCATED ALONG A CURBED ROADWAY



END VIEW LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION

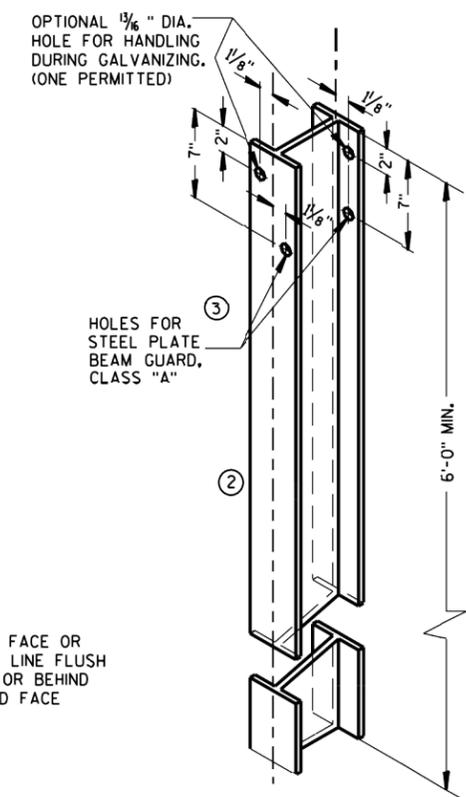


END VIEW STEEL POST & NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION

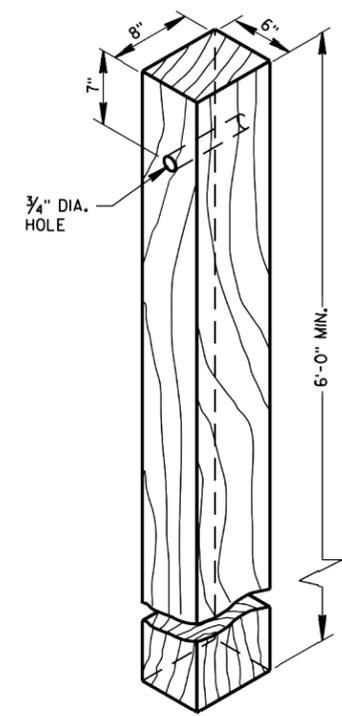


END VIEW LONGER POST AT HALF POST SPACING W BEAM (LHW)

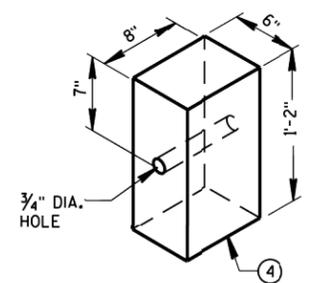
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD



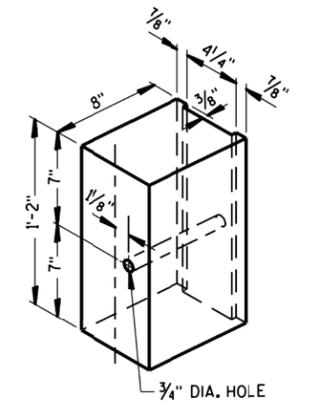
STEEL POST & HOLE PUNCHING DETAIL (W6 X 9) ①
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



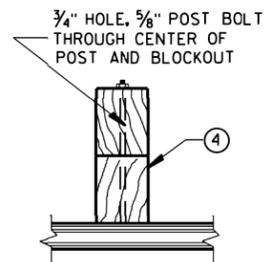
WOOD POST (6" X 8") NOMINAL



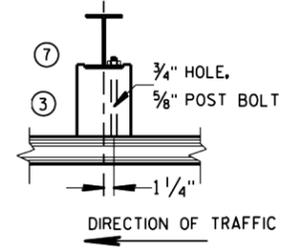
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS



TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS ①



PLAN VIEW WOOD POST, BLOCKOUT & BEAM



PLAN VIEW STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS

SHEET NO. D-6

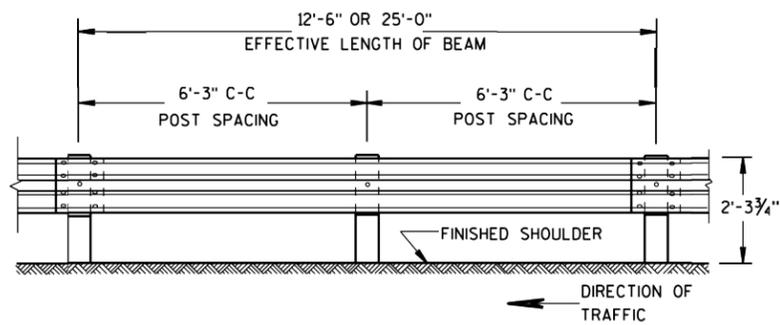
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

6

6

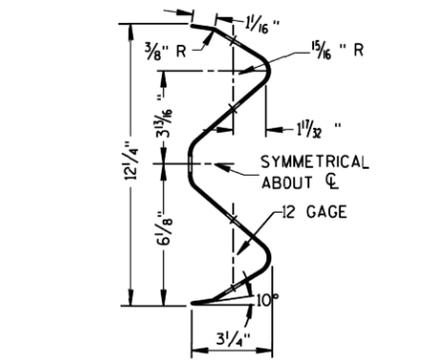
S.D.D. 14 B 15-8a

S.D.D. 14 B 15-8a

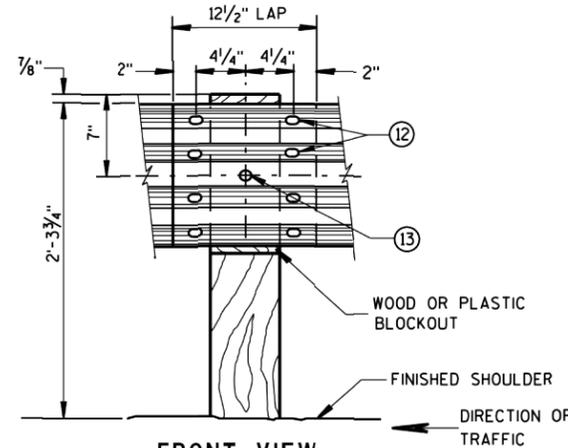


FRONT VIEW

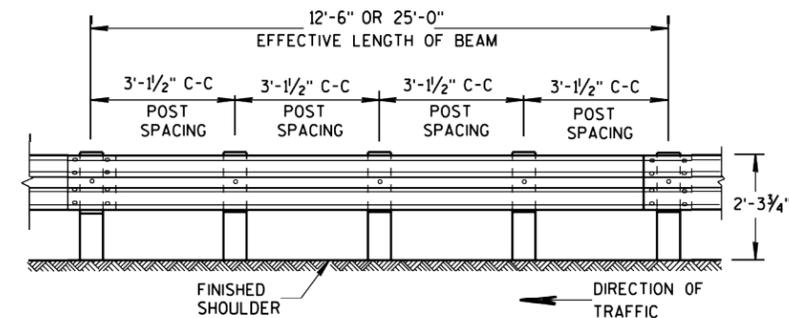
POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

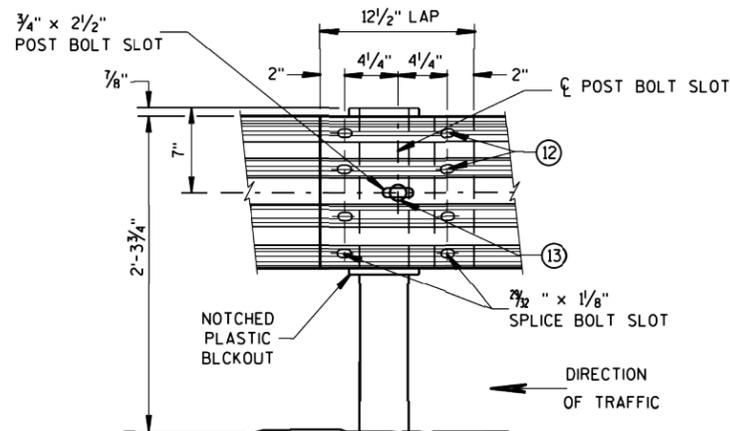


FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL

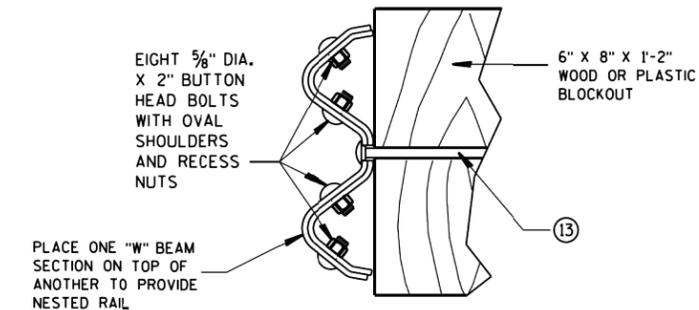


FRONT VIEW

POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



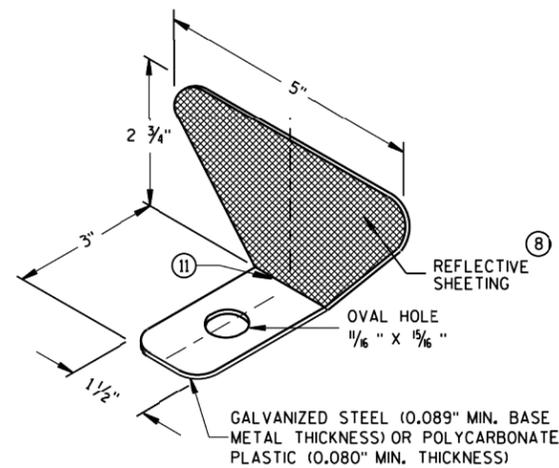
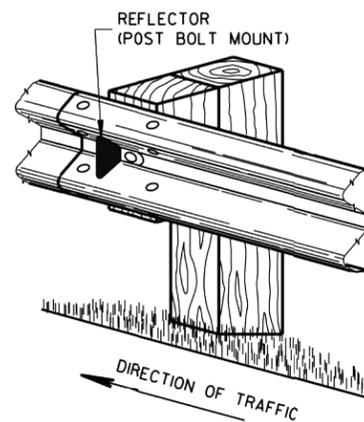
FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPLICING DETAILS
OF STEEL PLATE BEAM GUARD



NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING ⁹

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	3
TWO WAY TRAFFIC	< 200'	25' C-C	1 ¹⁰	6
	> 200'	50' C-C	1 ¹⁰	6
TWO WAY TRAFFIC	< 200'	50' C-C	2 ¹¹	3
	> 200'	100' C-C	2 ¹¹	3



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⁸

GENERAL NOTES

- 8 PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
- 9 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 10 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
- 11 PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
- 12 8 - 5/8" φ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- 13 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.

6

6

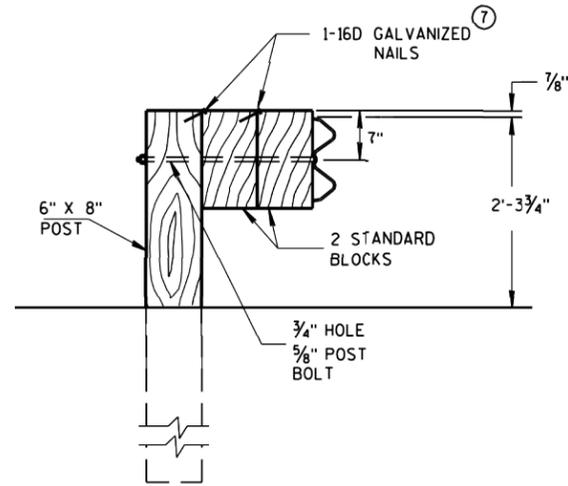
S.D.D. 14 B 15-8b

S.D.D. 14 B 15-8b

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

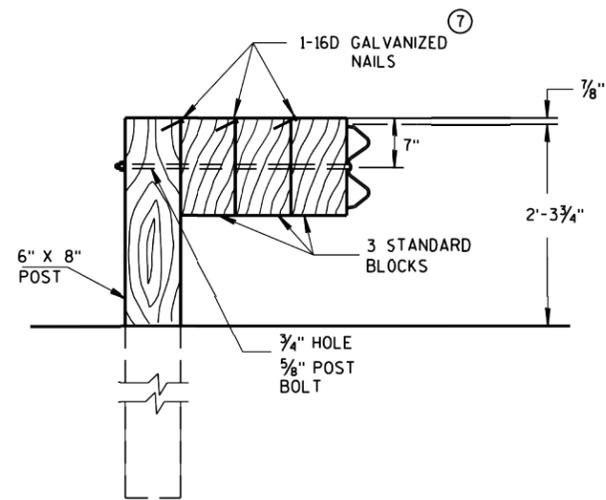
SHEET NO.
D-7

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

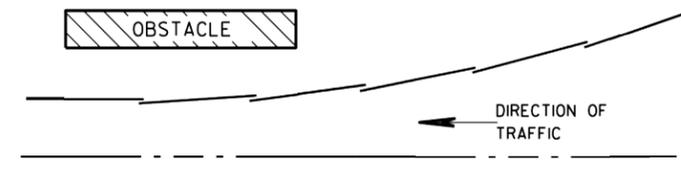


DETAIL FOR TRIPLE BLOCKS

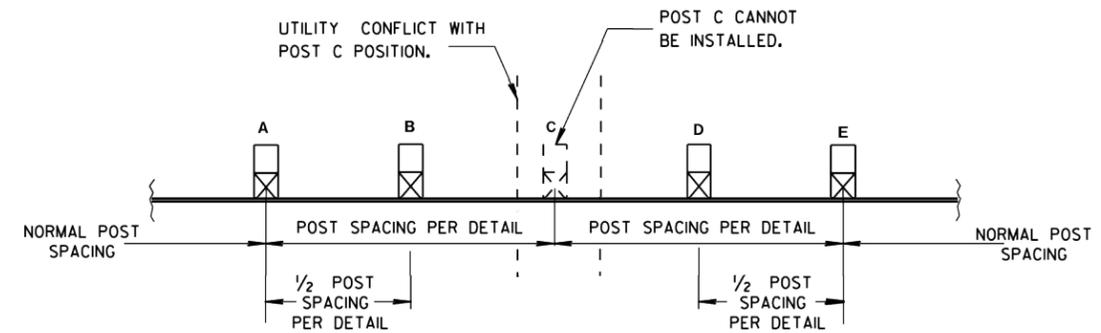
TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**PLAN VIEW
BEAM LAPPING DETAIL**



**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

6

6

S.D.D. 14 B 15-8C

S.D.D. 14 B 15-8C

**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

SHEET NO.
D-8

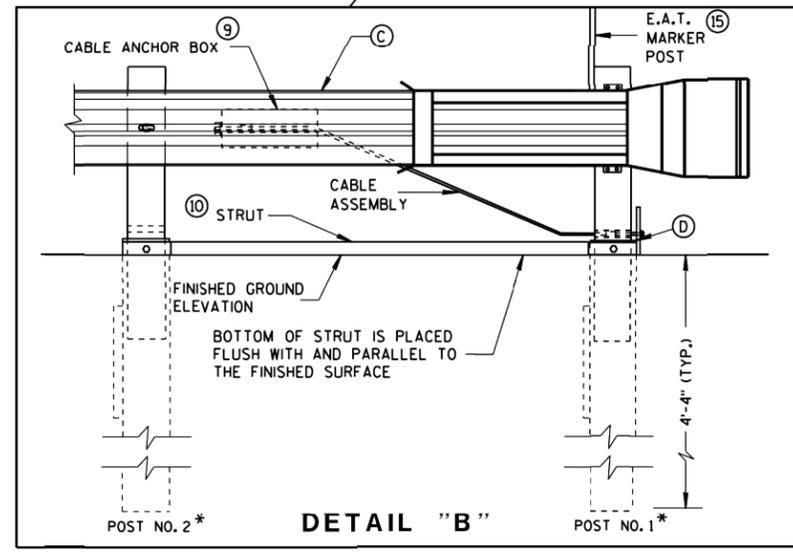
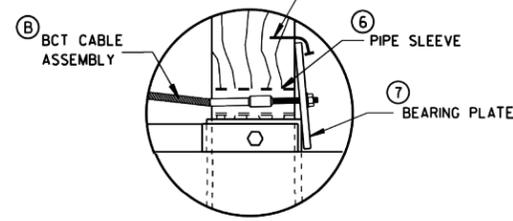
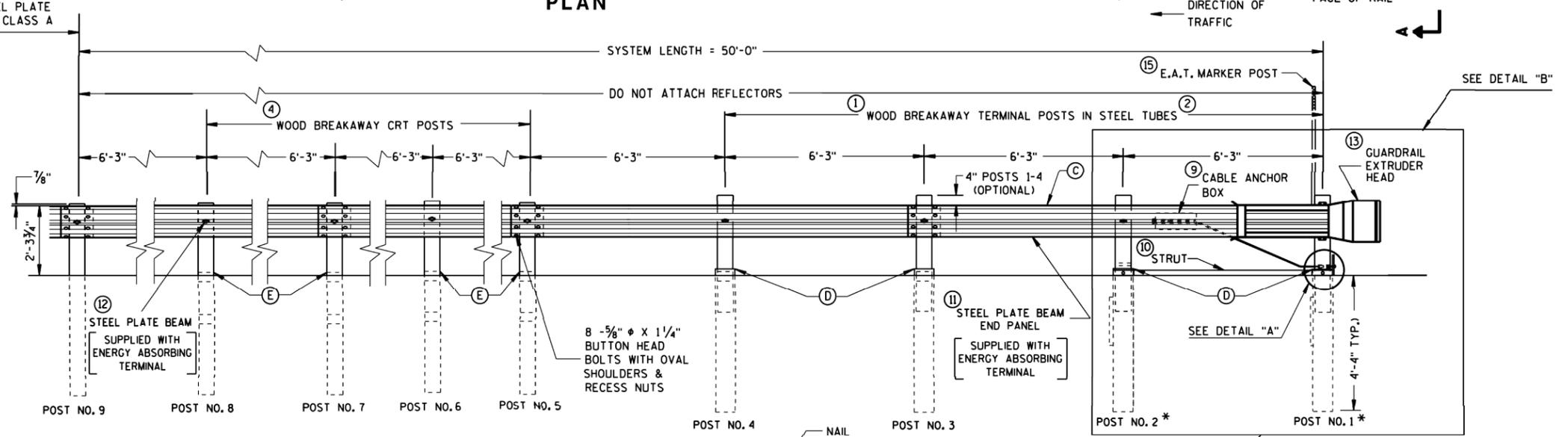
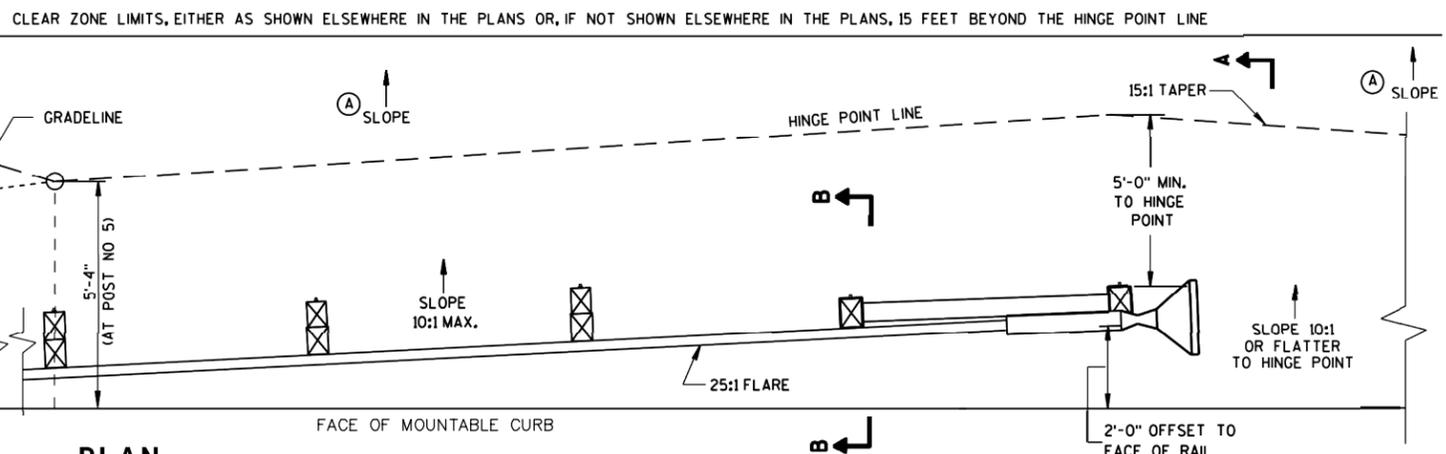
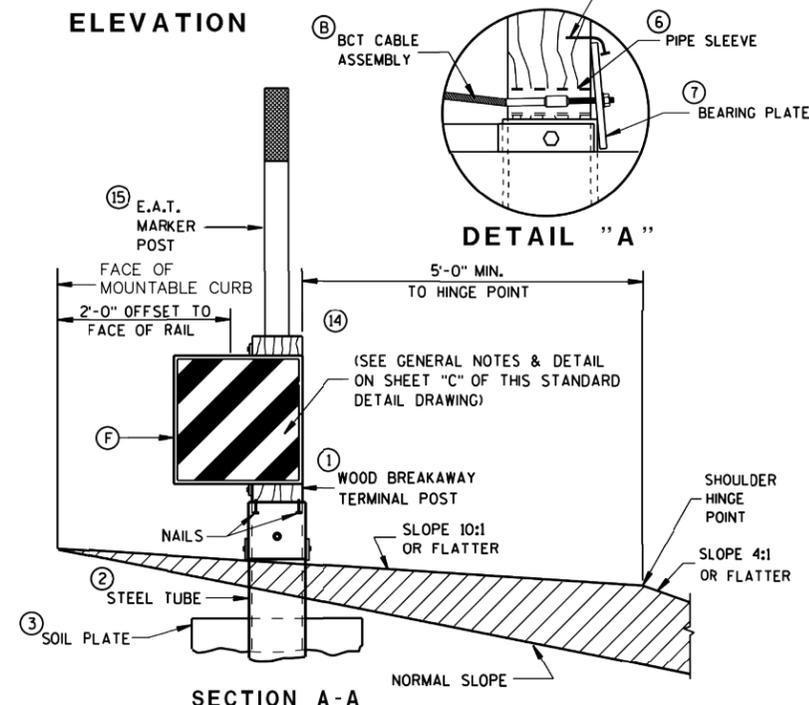
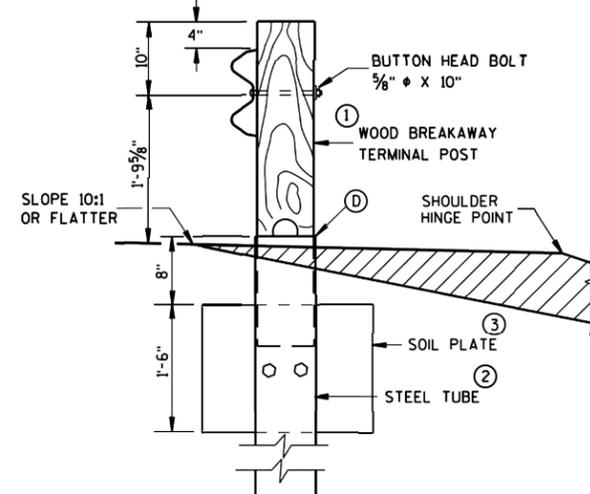
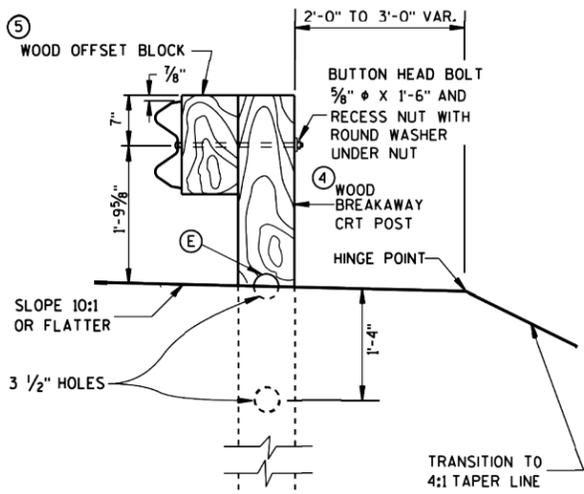
14B24 sheet a: Steel Plate Beam Guard Energy Absorbing Terminal

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
①	4	WOOD BREAKAWAY TERMINAL POST: 5 1/2" X 7 1/2" X 3'-9"
②	**	STEEL TUBE: OPTION 1 - QUANTITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANTITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
③	2	SOIL PLATE: 2'-0" X 1'-6" X 1/4" **
④	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	6	WOOD OFFSET BLOCKS: 6" X 8" X 1'-2"
⑥	1	PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE
⑦	1	BEARING PLATE
⑧	1	BCT CABLE ASSEMBLY
⑨	1	CABLE ANCHOR BOX
⑩	1	STRUT & YOKE
⑪	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6 1/2" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
⑫	3	STEEL PLATE BEAM: 12 GA. 13'-6 1/2"
⑬	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
⑭	1	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑮	1	E.A.T. MARKER POST

GENERAL NOTES

- FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS. IF NONE ARE AVAILABLE, INSTALL 5/8" ϕ X 1'-6" BUTTON HEAD BOLTS AT ALL POSTS EXCEPT FOR POST 1.
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) THE 13 SLOT FIRST RAIL PANEL MAY BE USED IN LIEU OF THE 3 SLOT RAIL PANEL ON SKT-350 ONLY.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 THROUGH 4 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST 5 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.
- DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- * DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.
- ** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE SOIL PLATES.



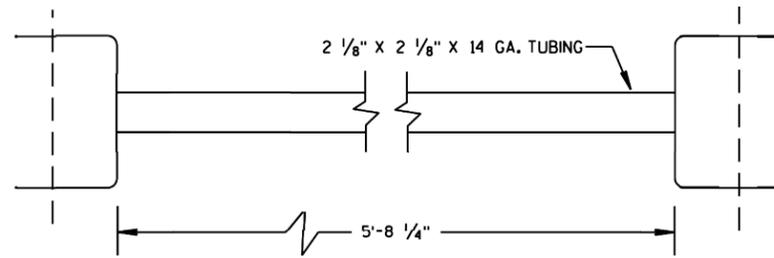
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL
(MODIFIED)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

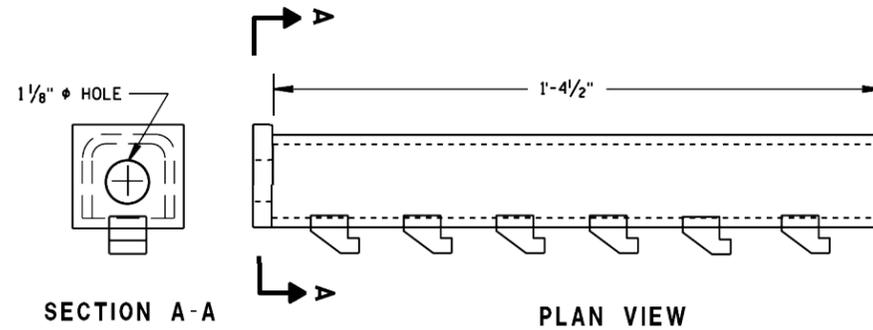
S.D.D. 14 B 24-8a

S.D.D. 14 B 24-8a

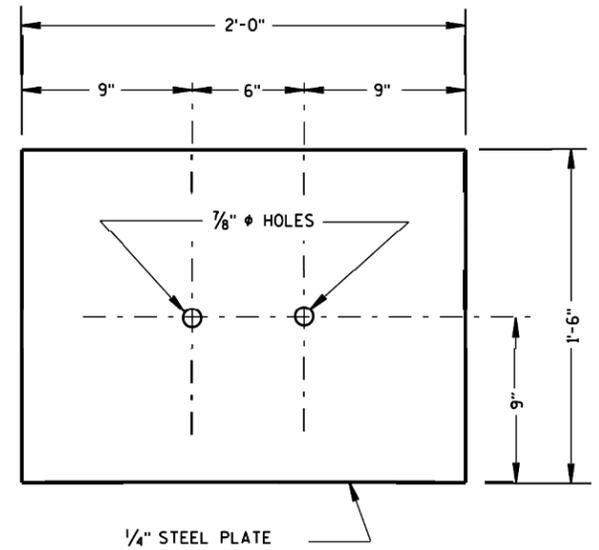
SHEET NO.
D-9



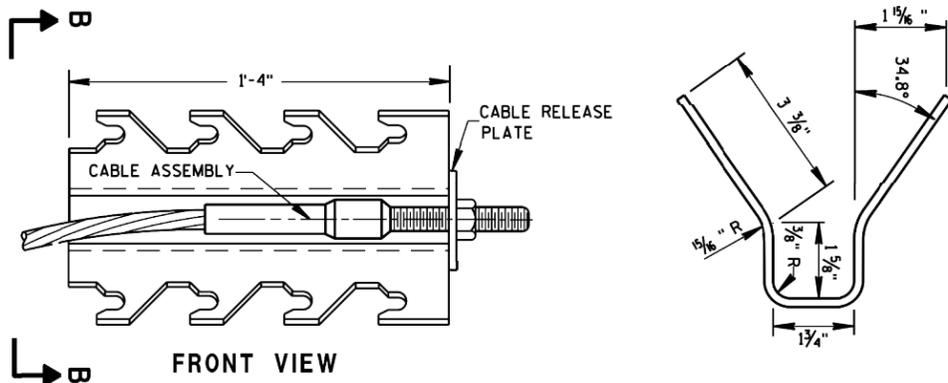
⑩ STRUT DETAIL (SKT-350)



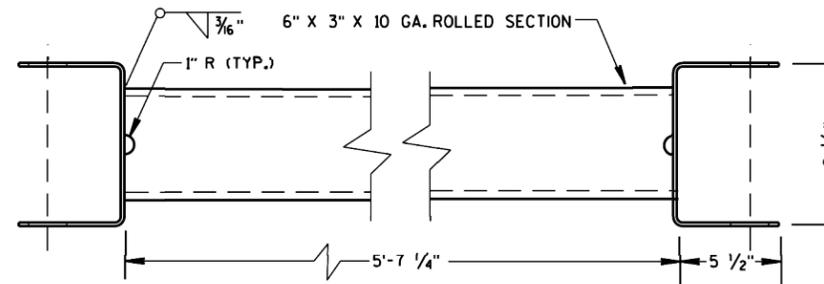
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



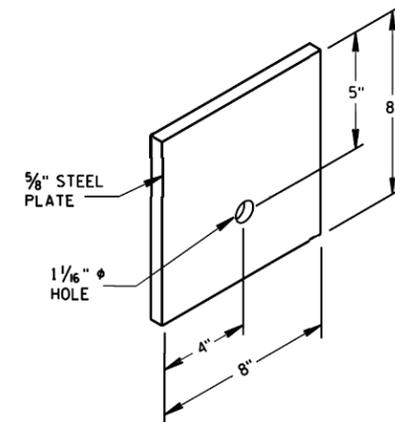
③ SOIL PLATE
(SKT-350, ET-2000/ET-2000 PLUS)



⑨ CABLE ANCHOR BOX (SKT-350)
(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)
(ET-2000/ET-2000 PLUS)



⑦ STEEL BEARING PLATE
(SKT-350, ET-2000/ET-2000 PLUS)

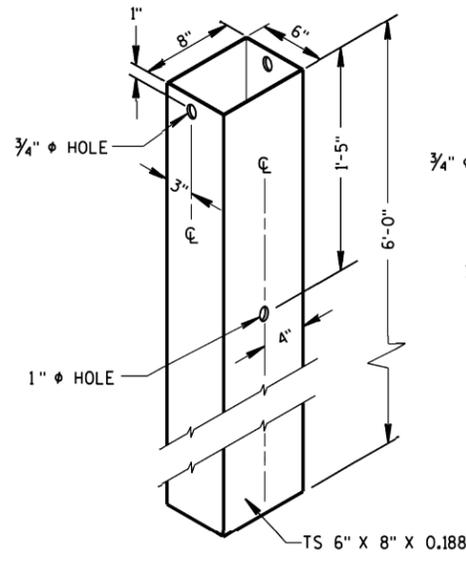
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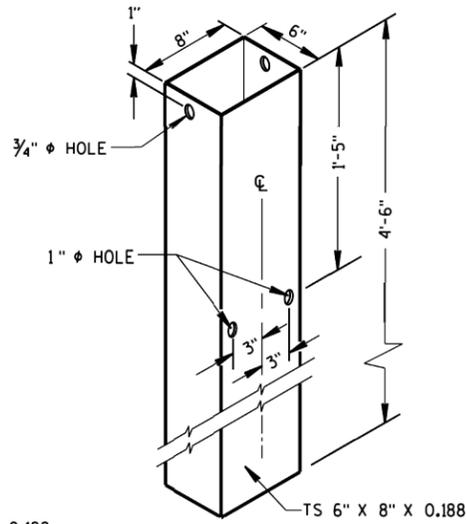
S.D.D. 14 B 24-8b

S.D.D. 14 B 24-8b

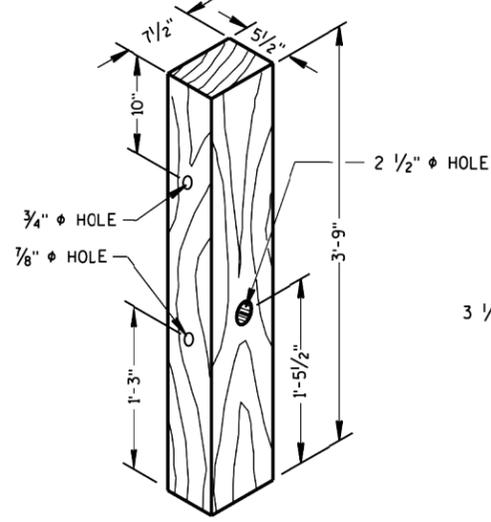
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	
SHEET NO. D-10	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



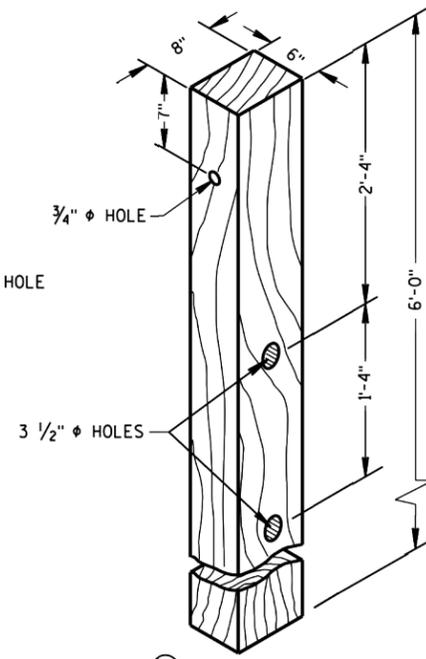
② 72" STEEL TUBE
(POSTS NO. 1-4)



② 54" STEEL TUBE
(POSTS NO. 1-4)

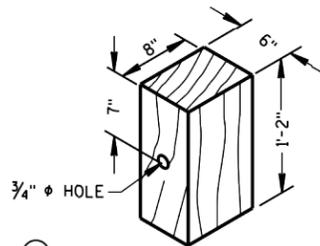


① TERMINAL POST
(POSTS NO. 1-4)



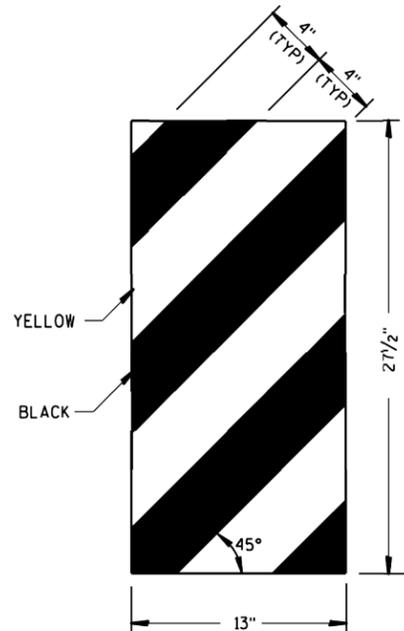
④ CRT POST
(POSTS NO'S 5-8)

WOOD BREAKAWAY POSTS

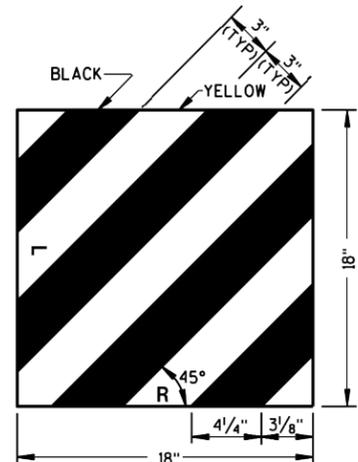


⑤ WOOD OFFSET BLOCK
REOD. AT ALL POSTS EXCEPT POST NO'S 1 & 2

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9"
SEE STANDARD
SPECIFICATION 637

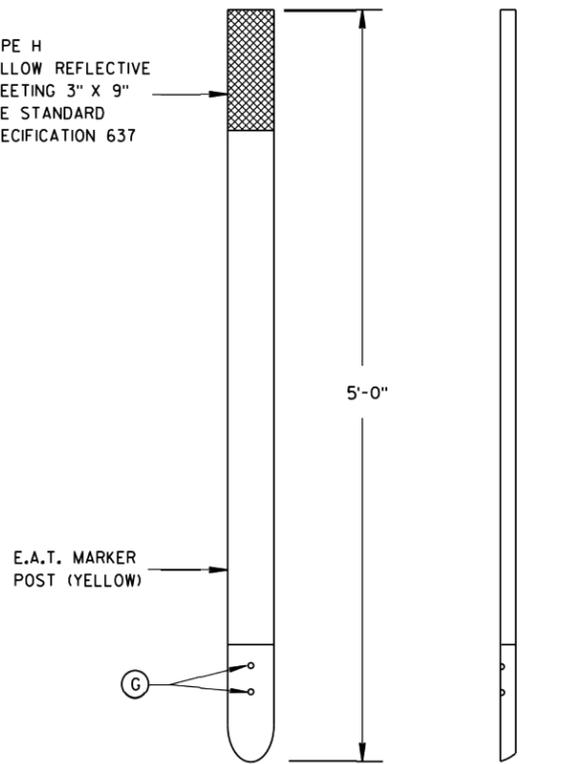


ET-2000 PLUS ONLY

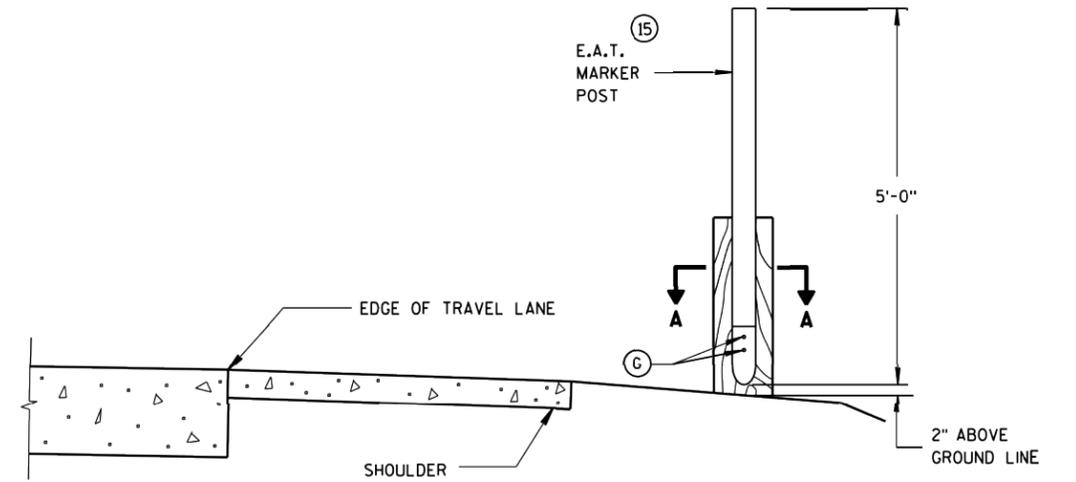


ET-2000 AND SKT-350

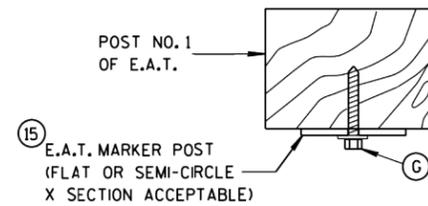
⑭ REFLECTIVE SHEETING DETAILS



FRONT VIEW SIDE VIEW
⑮ E.A.T. MARKER POST



TYPICAL INSTALLATION OF E.A.T.
MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

GENERAL NOTES

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.

SEE APPROVED PRODUCTS LIST FOR ACCEPTABLE E. A. T. MARKER POST.

⑮ 1/2" DIA. X 3" LAG BOLT WITH WASHER.

6

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S.D.D. 14 B 24-8c

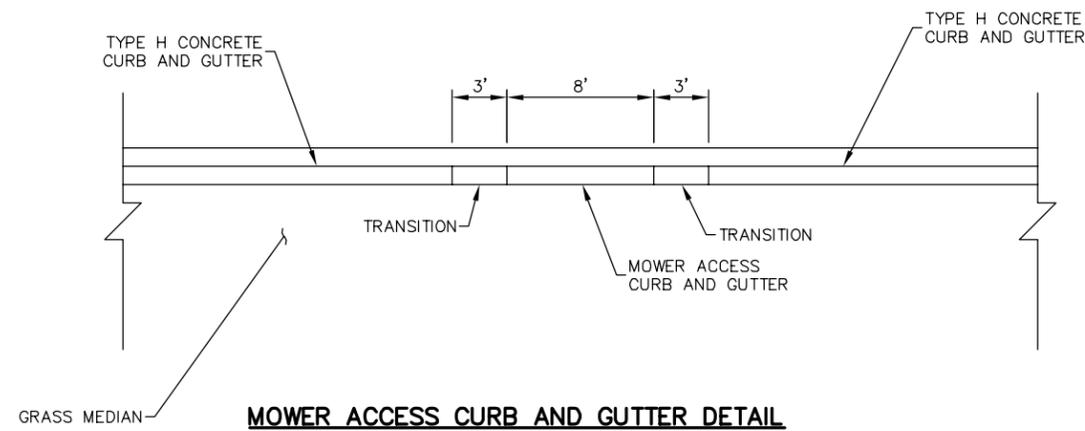
S.D.D. 14 B 24-8c

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE June 2014 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

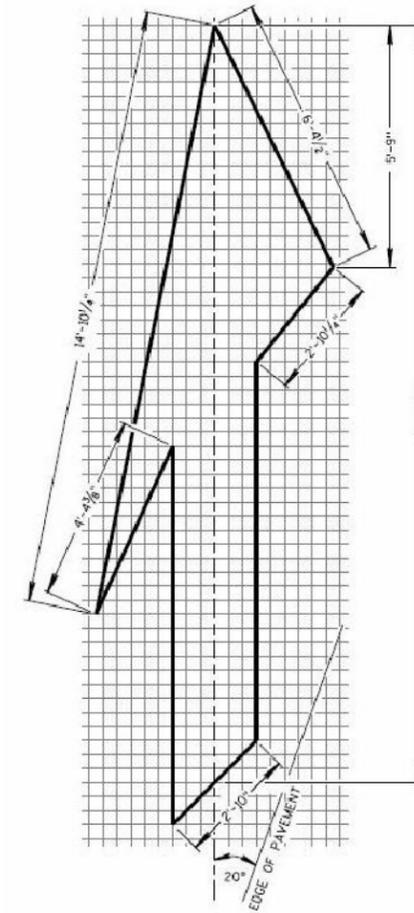
SHEET NO.
D-11



MOWER ACCESS CURB AND GUTTER DETAIL

NOTES:

1. THE CONTRACTOR SHALL VERIFY FINAL LOCATION OF MOWER ACCESS WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
2. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO CONSTRUCT THE MOWER ACCESS CURB AND GUTTER AND TRANSITIONS SHALL BE PAID AS THE ADJACENT CONCRETE CURB AND GUTTER TYPE.



PAVEMENT MARKING EPOXY. SYMBOL. MERGE ARROW DETAIL

NOTES:

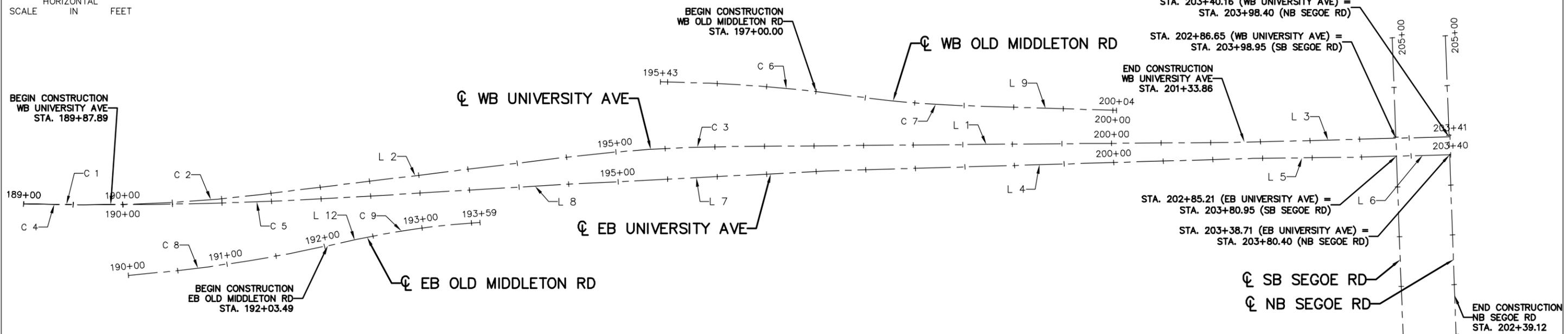
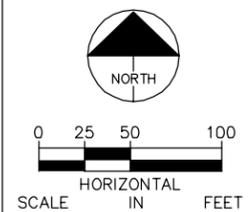
1. DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CITY OF MADISON AND WISDOT STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



ALIGNMENT DATA
WB UNIVERSITY AVE

SEGMENT NUMBER	BEGINNING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
C 1	189+00.00	189+62.85	189+31.43		1°15'27"	2°00'02.13"	2863.94	31.43	62.85	482994.95	800310.37	91°26'01" 90°10'34"
C 2	189+62.85	191+40.26	190+51.67		7°05'46"	3°59'59.94"	1432.40	88.82	177.41	482994.07	800373.21	90°10'34" 83°04'48"
L 2	191+40.26	194+52.34							312.08	483004.50	800550.20	83°04'48"
C 3	194+52.34	196+13.14	195+32.82		6°25'55"	3°59'59.94"	1432.40	80.49	160.80	483042.10	800860.00	83°04'48" 89°30'44"
L 1	196+13.14	201+33.91							520.77	483052.48	801020.38	89°30'44"
L 3	201+33.91	203+41.16							207.25	483056.92	801541.13	88°30'44"

ALIGNMENT DATA
EB UNIVERSITY AVE

SEGMENT NUMBER	BEGINNING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
C 4	189+00.00	189+61.47	189+30.74		1°13'50"	2°00'05.85"	2862.46	30.74	61.47	482994.95	800310.37	91°26'02" 90°12'13"
C 5	189+61.47	192+30.25	190+95.91		3°37'25"	1°20'53.29"	4250.00	134.43	268.78	482994.08	800371.83	90°12'13" 86°34'48"
L 8	192+30.25	194+47.22							216.97	483001.62	800640.46	86°34'48"
L 7	194+47.22	197+10.45							263.23	483014.56	800857.04	87°04'48"
L 4	197+10.45	201+39.96							429.51	483027.97	801119.93	88°18'44"
L 5	201+39.96	202+39.89							99.94	483040.62	801549.25	89°22'09"
L 6	202+39.89	203+39.71							99.82	483041.72	801649.18	88°30'49"

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

**ALIGNMENT DATA
WB OLD MIDDLETON RD**

SEGMENT NUMBER	BEGINING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
C 6	195+42.77	197+38.46	196+40.75		7'28'27"	3'49'09.87"	1500.12	97.98	195.69	483117.56	800952.46	90°31'52" 98°00'19"
C 7	197+38.46	198+46.71	197+92.64		6'12'09"	5'43'46.48"	1000.00	54.18	108.25	483103.01	801147.46	98°00'19" 91°48'10"
L 9	198+46.71	200+03.65							156.94	483093.76	801255.27	91°48'10"

**ALIGNMENT DATA
SB SEGOE RD**

SEGMENT NUMBER	BEGINING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
L 10	200+00.00	205+00.00							500.00	482662.20	801708.27	357°55'30"

**ALIGNMENT DATA
NB SEGOE RD**

SEGMENT NUMBER	BEGINING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
L 11	200+00.00	205+00.00							500.00	482664.13	801761.74	357°55'30"

**ALIGNMENT DATA
EB OLD MIDDLETON RD**

SEGMENT NUMBER	BEGINING STATION	ENDING STATION	PI STATION	NOTES	DELTA	DEGREE	RADIUS (FT)	TANGENT (FT)	LENGTH (FT)	COORDINATES NORTHING	COORDINATES EASTING	AZIMUTH
C 8	190+00.00	192+03.53	191+01.92		7'46'27"	3'49'10.99"	1500.00	101.92	203.53	482923.19	800416.06	85°28'01" 77°41'34"
L 12	192+03.53	192+31.66							28.14	482952.97	800617.23	77°41'34"
C 9	192+31.66	193+58.70	192+95.31		8°53'14"	6°59'44.96"	819.00	63.65	127.03	482958.96	800644.73	77°41'34" 86°34'48"

PLOT SCALE: _____

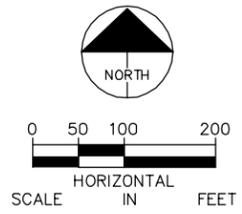
PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

LEGEND

-  WB OLD MIDDLETON RD VEHICLE TRAFFIC DETOUR
-  WB OLD MIDDLETON RD BICYCLE TRAFFIC DETOUR
-  WB OLD MIDDLETON RD PEDESTRIAN TRAFFIC DETOUR
-  EB OLD MIDDLETON RD BICYCLE TRAFFIC DETOUR
-  POST MOUNTED SIGN

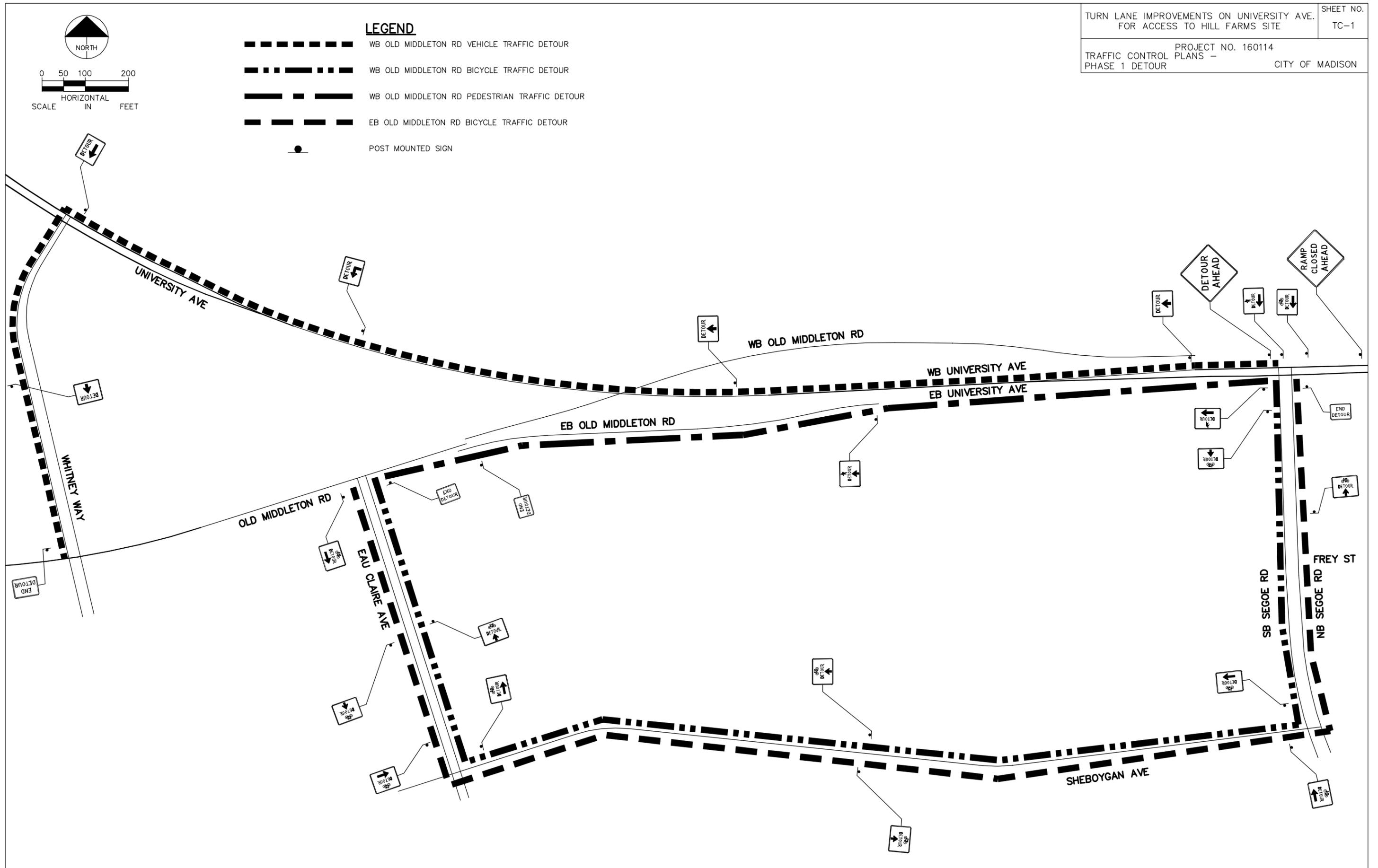


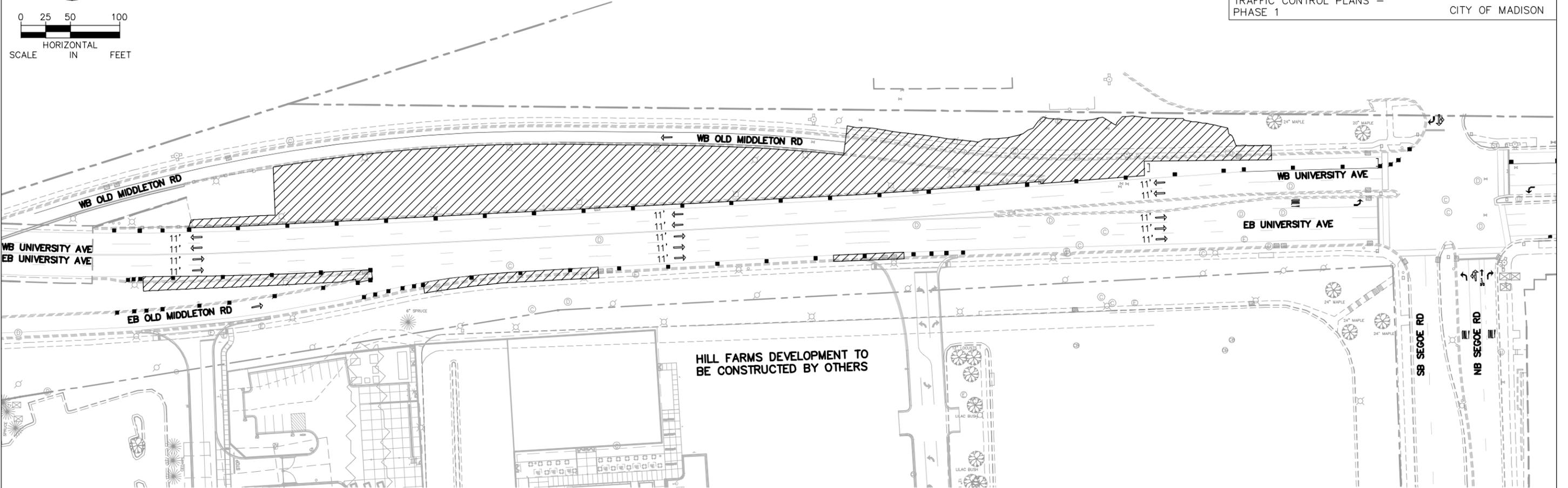
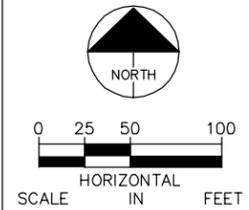
PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES





PHASE 1 TRAFFIC OPERATIONS

- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- MAINTAIN TWO WB AND TWO EB UNIVERSITY AVE THROUGH LANES DURING PEAK HOURS. THE CONTRACTOR SHALL NOT REDUCE THE NUMBER OF THROUGH TRAFFIC LANES ALONG UNIVERSITY AVE WITHOUT AUTHORIZATION FROM THE CONSTRUCTION MANAGER OR CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
- REDUCE WB AND EB UNIVERSITY AVE OUTSIDE SHOULDERS.
- REDUCE EB OLD MIDDLETON RD SHOULDERS. MAINTAIN VEHICLE AND PEDESTRIAN THROUGH TRAFFIC. CLOSE BICYCLE THROUGH TRAFFIC.
- CLOSE WB OLD MIDDLETON RD TO VEHICLE, BICYCLE, AND PEDESTRIAN THROUGH TRAFFIC.
- DETOUR WB OLD MIDDLETON RD VEHICLE TRAFFIC VIA WB UNIVERSITY AVE AND SB WHITNEY WAY.
- DETOUR WB OLD MIDDLETON RD BICYCLE TRAFFIC VIA SB SEGOE ROAD, WB SHEBOYGAN AVENUE, AND NB EAU CLAIRE AVE.
- DETOUR WB OLD MIDDLETON RD PEDESTRIAN TRAFFIC TO SOUTH SIDE OF UNIVERSITY AVE AT SEGOE RD AND SOUTH SIDE OF EB OLD MIDDLETON RD AT EAU CLAIRE AVE INTERSECTIONS.
- DETOUR EB OLD MIDDLETON RD BICYCLE TRAFFIC VIA SB EAU CLAIRE AVE, EB SHEBOYGAN AVE, AND NB SEGOE RD.

PHASE 1 CONSTRUCTION OPERATIONS

- CONSTRUCT OUTSIDE EB UNIVERSITY AVE SHOULDER: SAWCUT AND REMOVE EXISTING PAVEMENT, GRADE, RECONSTRUCT CURB AND GUTTER, GRIND EXISTING PAVEMENT, RECONSTRUCT LOWER LIFT OF NEW HMA PAVEMENT, AND PLACE FINAL SIGNS.
- CONSTRUCT OUTSIDE WB UNIVERSITY AVE LANE AND SHOULDER: SAWCUT AND REMOVE EXISTING PAVEMENT, GRADE, RECONSTRUCT CURB AND GUTTER, RECONSTRUCT LOWER LIFT OF NEW HMA PAVEMENT, AND PLACE FINAL SIGNS.
- CONSTRUCT WB OLD MIDDLETON RD: SAWCUT AND REMOVE EXISTING PAVEMENT, GRADE, RECONSTRUCT CURB AND GUTTER, RECONSTRUCT CONCRETE SIDEWALK, RELOCATE HYDRANT, GRIND EXISTING PAVEMENT WITHIN WB OLD MIDDLETON RD AUXILIARY LANE, RECONSTRUCT LOWER LIFT OF NEW HMA PAVEMENT, AND PLACE FINAL SIGNS.
- CONSTRUCT STORM SEWER IMPROVEMENTS. STORM SEWER RECONSTRUCTION MAY REQUIRE USE OF TEMPORARY STEEL PLATES OR OTHER TEMPORARY RESTORATION MEASURES TO MAINTAIN TRAFFIC DURING PEAK HOURS. TRENCH BOXES OR OTHER STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS. TRENCH BOXES, STEEL PLATES, AND OTHER TEMPORARY RESTORATION MEASURES SHALL BE INCIDENTAL.
- INSTALL TEMPORARY STREET LIGHTING AND OVERHEAD FIBER OPTIC CIRCUITS ALONG NORTH SIDE OF UNIVERSITY AVE.
- RELOCATE STREET LIGHTING UNITS ALONG NORTH SIDE OF UNIVERSITY AVE AND INSTALL STREET LIGHTING CIRCUITS.
- ADJUST UTILITY VALVES AND MANHOLES TO GRADE.

TRAFFIC CONTROL GENERAL NOTES

- ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AND FOLLOW THE CURRENT EDITION OF THE MUTCD FOR REVIEW BY THE ENGINEER CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL VERIFY TRAFFIC CONTROL DEVICES AND SIGNS WITH THE CONSTRUCTION MANAGER PRIOR TO PLACEMENT.
- ADJUST SPACING BETWEEN SIGNS TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 250' (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE "W" EXCEPT THE BACKGROUND IS ORANGE.
- THE CONTRACTOR SHALL REMOVE OR COVER ANY SIGN TEMPORARY OR EXISTING WHICH CONFLICTS WITH THE TRAFFIC OPERATIONS FOR EACH CONSTRUCTION PHASE.
- THE CONTRACTOR SHALL REMOVE PAVEMENT MARKINGS WHICH CONFLICT WITH THE TRAFFIC OPERATIONS FOR EACH CONSTRUCTION PHASE.
- POSTED SPEED LIMIT ON UNIVERSITY AVE IS 35 MPH. POSTED SPEED LIMIT ON SEGOE RD IS 30 MPH.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MUTCD.
- THE TRAFFIC CONTROL PLANS DEPICT A GENERAL PLAN FOR MAINTAINING TRAFFIC. ADDITIONAL TRAFFIC CONTROL MAY BE REQUIRED TO COMPLETE SPECIFIC PORTIONS OF THE PROJECT. ADDITIONAL TRAFFIC CONTROL REQUIRED BY THE PROJECT, BUT NOT DEPICTED ON THESE PLANS, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TRAFFIC CONTROL. ADDITIONAL TRAFFIC CONTROL MAY INCLUDE, BUT NOT LIMITED TO, TEMPORARY LANE CLOSURES, TEMPORARY SHOULDER CLOSURES, AND TEMPORARY PEDESTRIAN/BICYCLE FACILITIES CLOSURES.
- PLACE PORTABLE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF PROJECT LIMITS ALONG EB AND WB UNIVERSITY AVE, NB SEGOE RD, AND EB OLD MIDDLETON RD AT LEAST 14 CALENDAR DAYS BEFORE THE BEGIN DATE OF CONSTRUCTION.

LEGEND

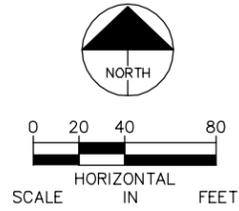
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING)
- ELECTRONIC FLASHING ARROWBOARD
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

PLOT SCALE:

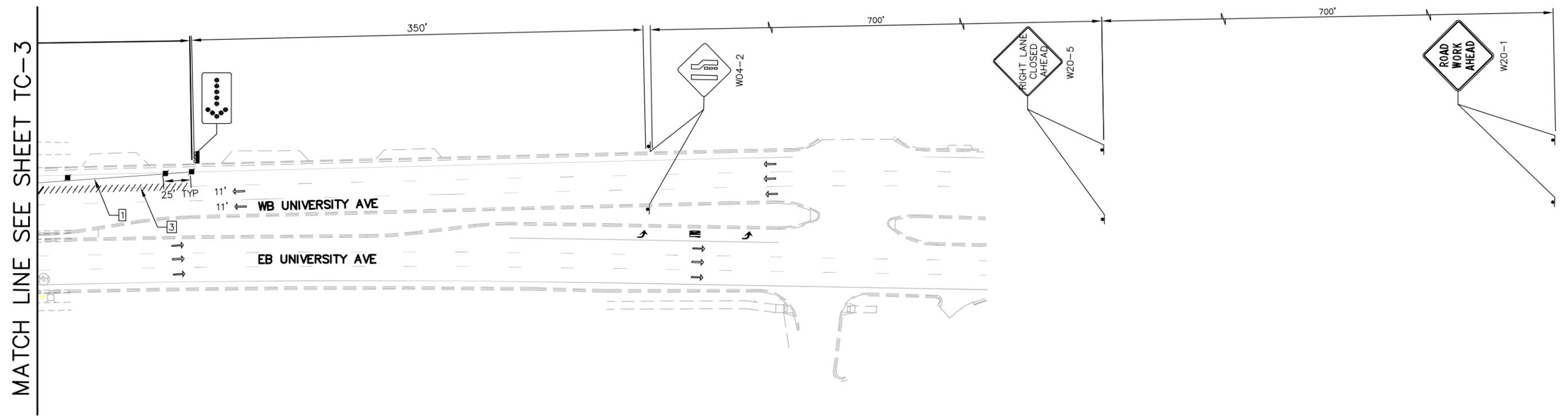
PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



- LEGEND**
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
 - POST MOUNTED SIGN
 - TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING)
 - ELECTRONIC FLASHING ARROWBOARD
 - WORK AREA
 - DIRECTION OF TRAFFIC FLOW
 - 1 TEMPORARY PAVEMENT MARKING TAPE, REMOVABLE, LINE, 4-INCH
 - 2 TEMPORARY PAVEMENT MARKING PAINT, LINE, 4-INCH
 - 3 PAVEMENT MARKING REMOVAL, 4-INCH
 - 4 PAVEMENT MARKING EPOXY, LINE, 4-INCH

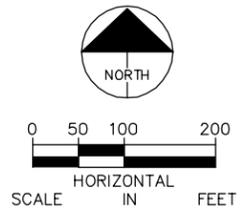


ORIGINATOR : KIMLEY HORN AND ASSOCIATES

REV. DATE: _____

PLOT NAME: _____

PLOT SCALE: _____



LEGEND

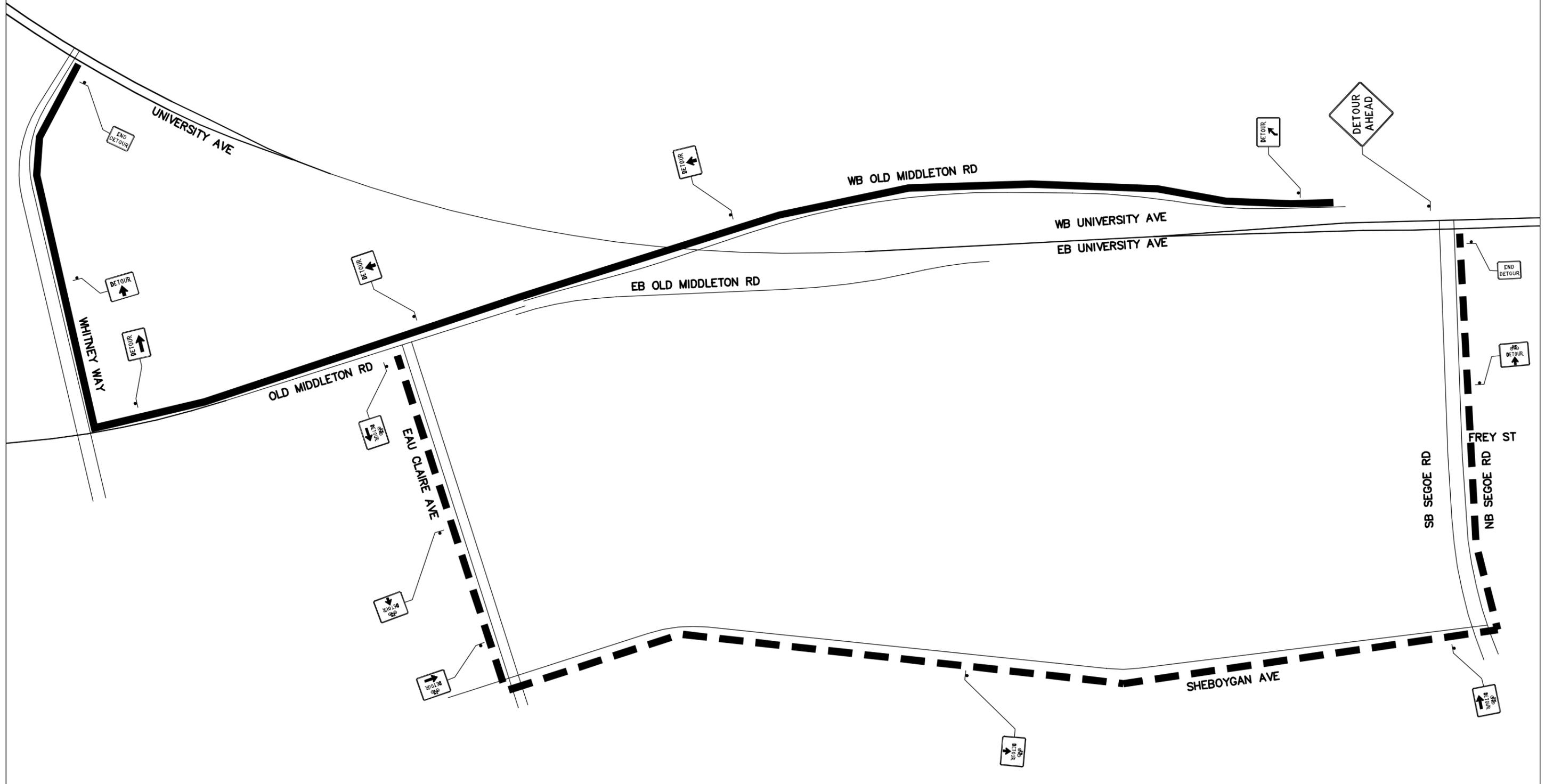
-  EB OLD MIDDLETON RD BICYCLE TRAFFIC DETOUR
-  WB UNIVERSITY AVE VEHICLE TRAFFIC DETOUR
-  POST MOUNTED SIGN

PLOT SCALE: _____

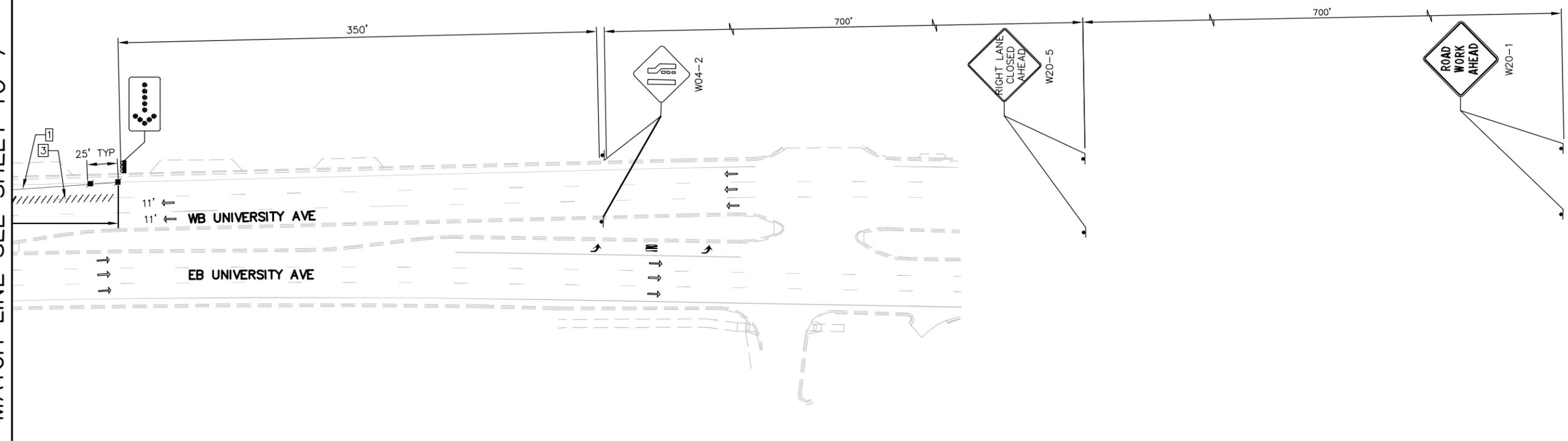
PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

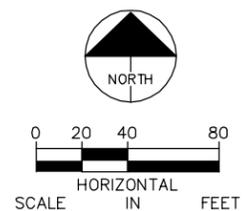


MATCH LINE SEE SHEET TC-7

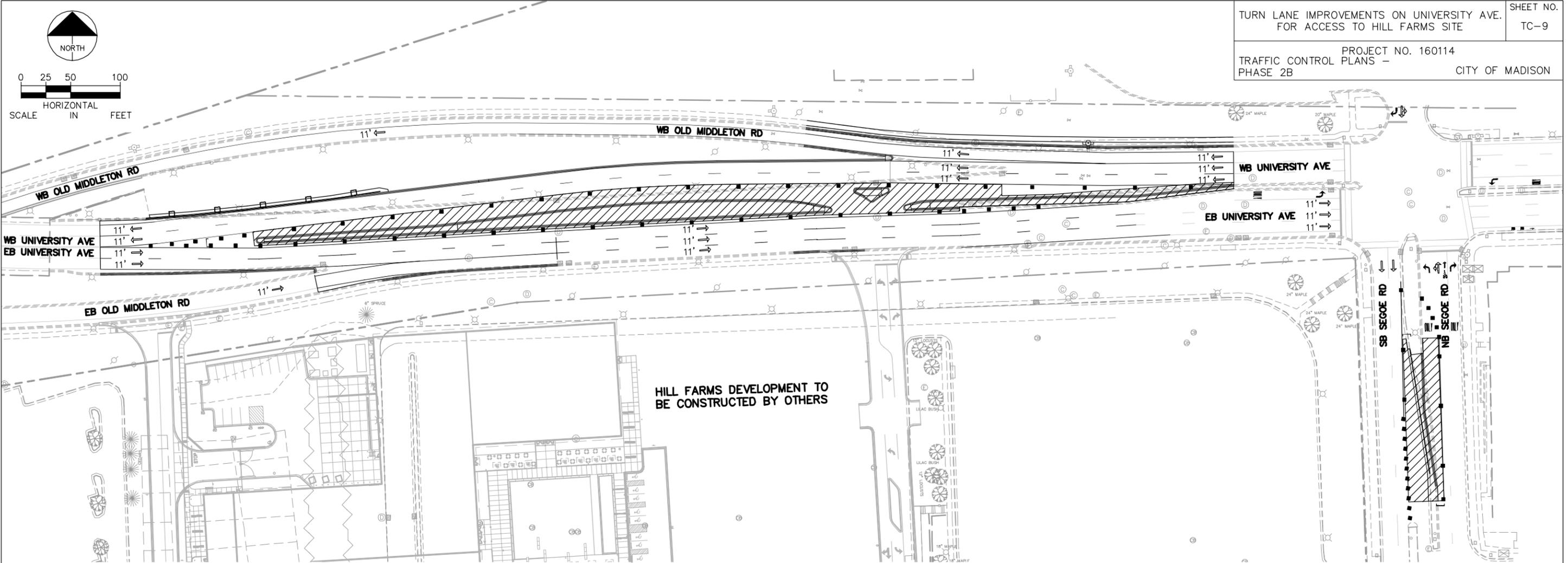


LEGEND

- | | | | |
|--|--|--|--|
| | DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN) | | 1 TEMPORARY PAVEMENT MARKING TAPE, REMOVABLE, LINE, 4-INCH |
| | POST MOUNTED SIGN | | 2 TEMPORARY PAVEMENT MARKING PAINT, LINE, 4-INCH |
| | TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) | | 3 PAVEMENT MARKING REMOVAL, 4-INCH |
| | ELECTRONIC FLASHING ARROWBOARD | | 4 PAVEMENT MARKING EPOXY, LINE, 4-INCH |
| | WORK AREA | | |
| | DIRECTION OF TRAFFIC FLOW | | |



ORIGINATOR : KIMLEY HORN AND ASSOCIATES
 REV. DATE: _____
 PLOT NAME: _____
 PLOT SCALE: _____



PHASE 2B TRAFFIC OPERATIONS

- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- MAINTAIN WB OLD MIDDLETON RD THROUGH TRAFFIC AT ALL TIMES.
- MAINTAIN TWO WB AND TWO EB UNIVERSITY AVE THROUGH LANES DURING PEAK HOURS. THE CONTRACTOR SHALL NOT REDUCE THE NUMBER OF THROUGH TRAFFIC LANES WITHOUT AUTHORIZATION FROM THE CONSTRUCTION MANAGER OR CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
- REDUCE WB AND EB UNIVERSITY AVE OUTSIDE SHOULDERS.
- REDUCE EB OLD MIDDLETON RD SHOULDERS. MAINTAIN VEHICLE AND PEDESTRIAN THROUGH TRAFFIC. CLOSE TO BICYCLE THROUGH TRAFFIC.
- DETOUR EB OLD MIDDLETON RD BICYCLE TRAFFIC VIA SB EAU CLAIRE AVE, EB SHEBOYGAN AVE, AND NB SEGOE RD.
- MAINTAIN NB AND SB SEGOE RD THROUGH TRAFFIC. NO LANE CLOSURES SHALL BE ALLOWED DURING PEAK HOURS.

PHASE 3 TRAFFIC OPERATIONS

- MAINTAIN ACCESS TO BUSINESSES AT ALL TIMES.
- MAINTAIN THROUGH TRAFFIC AT ALL TIMES.

PHASE 2B CONSTRUCTION OPERATIONS

- CONSTRUCT WB UNIVERSITY AVE LEFT TURN LANE AND ACCELERATION LANE: SAW CUT AND REMOVE EXISTING PAVEMENT, GRADE, CONSTRUCT CURB AND GUTTER, RECONSTRUCT LOWER LIFT OF NEW HMA PAVEMENT, PLACE FINAL SIGNS, AND CONSTRUCT ARCHITECTURAL CONCRETE MEDIANS.
- CONSTRUCT NB AND SB SEGOE RD LEFT TURN LANES: SAWCUT AND REMOVE EXISTING PAVEMENT, GRADE, RECONSTRUCT CURB AND GUTTER, RECONSTRUCT ALL LIFTS OF NEW HMA PAVEMENT, PLACE FINAL SIGNS, RELOCATE STREET LIGHT ASSEMBLY, PLACE FINAL SEEDING, AND PLACE PERMANENT PAVEMENT MARKINGS.
- CONSTRUCT TRAFFIC SIGNAL.
- CONSTRUCT STORM SEWER IMPROVEMENTS. STORM SEWER IMPROVEMENTS MAY REQUIRE USE OF TEMPORARY STEEL PLATES OR OTHER RESTORATION MEASURES TO MAINTAIN TRAFFIC DURING PEAK HOURS. TRENCH BOXES OR OTHER STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS. TRENCH BOXES, STEEL PLATES, AND OTHER TEMPORARY RESTORATION METHODS SHALL BE INCIDENTAL.

PHASE 3 CONSTRUCTION OPERATIONS

- CONSTRUCT FINAL LIFT OF NEW HMA PAVEMENT.
- PLACE PERMANENT PAVEMENT MARKINGS.
- PLACE FINAL SEEDING.
- CLEAN UP PROJECT SITE.

TRAFFIC CONTROL GENERAL NOTES

- ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AND FOLLOW THE CURRENT EDITION OF THE MUTCD FOR REVIEW BY THE ENGINEER.
- THE CONTRACTOR SHALL VERIFY TRAFFIC CONTROL DEVICES AND SIGNS WITH THE ENGINEER PRIOR TO PLACEMENT.
- ADJUST SPACING BETWEEN SIGNS TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 250' (500' DESIRABLE) DISTANCE TO EXISTING SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" IS THE "W" EXCEPT THE BACKGROUND IS ORANGE.
- THE CONTRACTOR SHALL REMOVE OR COVER ANY SIGN TEMPORARY OR EXISTING WHICH CONFLICTS WITH THE TRAFFIC OPERATIONS FOR EACH CONSTRUCTION PHASE.
- THE CONTRACTOR SHALL REMOVE PAVEMENT MARKINGS WHICH CONFLICT WITH THE TRAFFIC OPERATIONS FOR EACH CONSTRUCTION PHASE.
- POSTED SPEED LIMIT ON UNIVERSITY AVENUE IS 35 MPH. POSTED SPEED LIMIT ON SEGOE ROAD IS 30 MPH.
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MUTCD.
- THE TRAFFIC CONTROL PLANS DEPICT A GENERAL PLAN FOR MAINTAINING TRAFFIC. ADDITIONAL TRAFFIC CONTROL MAY BE REQUIRED TO COMPLETE SPECIFIC PORTIONS OF THE PROJECT. ADDITIONAL TRAFFIC CONTROL REQUIRED BY THE PROJECT, BUT NOT DEPICTED ON THESE PLANS, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TRAFFIC CONTROL. ADDITIONAL TRAFFIC CONTROL MAY INCLUDE, BUT NOT LIMITED TO, TEMPORARY LANE CLOSURES, TEMPORARY SHOULDER CLOSURES, AND TEMPORARY PEDESTRIAN/BICYCLE FACILITIES CLOSURES.

LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING)
- ELECTRONIC FLASHING ARROWBOARD
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

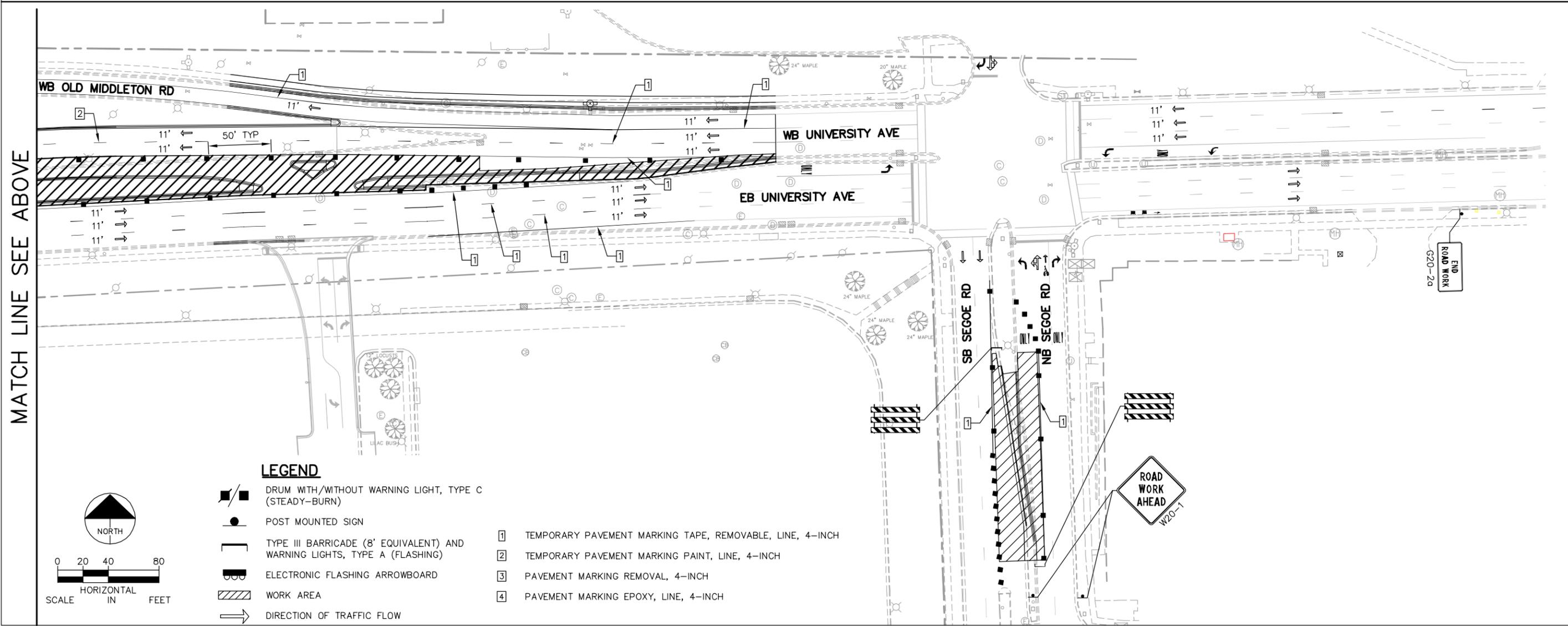
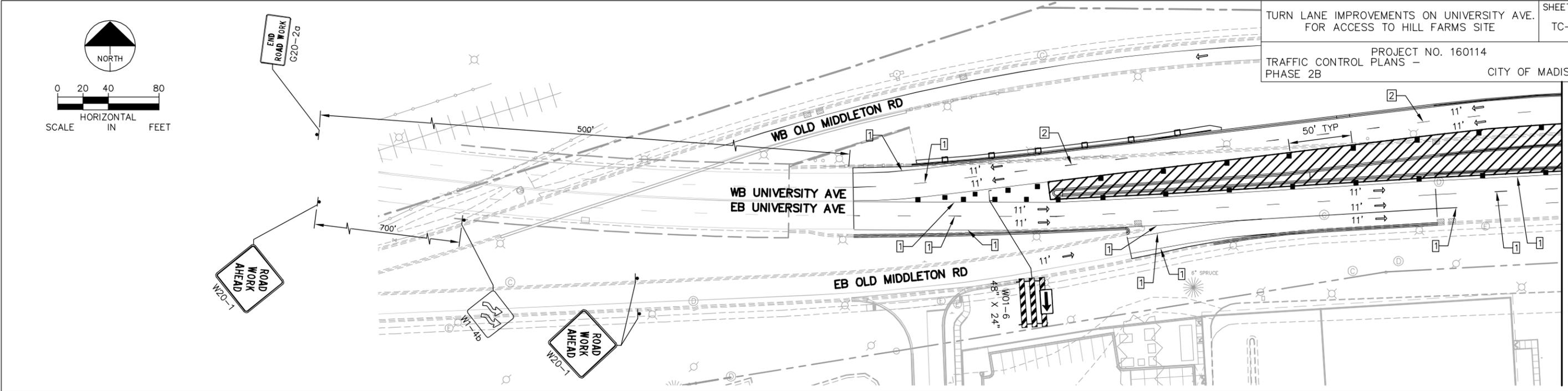
PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

MATCH LINE SEE BELOW



LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING)
- ELECTRONIC FLASHING ARROWBOARD
- WORK AREA
- DIRECTION OF TRAFFIC FLOW
- 1 TEMPORARY PAVEMENT MARKING TAPE, REMOVABLE, LINE, 4-INCH
- 2 TEMPORARY PAVEMENT MARKING PAINT, LINE, 4-INCH
- 3 PAVEMENT MARKING REMOVAL, 4-INCH
- 4 PAVEMENT MARKING EPOXY, LINE, 4-INCH

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



15D28: Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S	SHOULDER TAPER LENGTH (FEET)				BUFFER SPACE (FEET)
	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

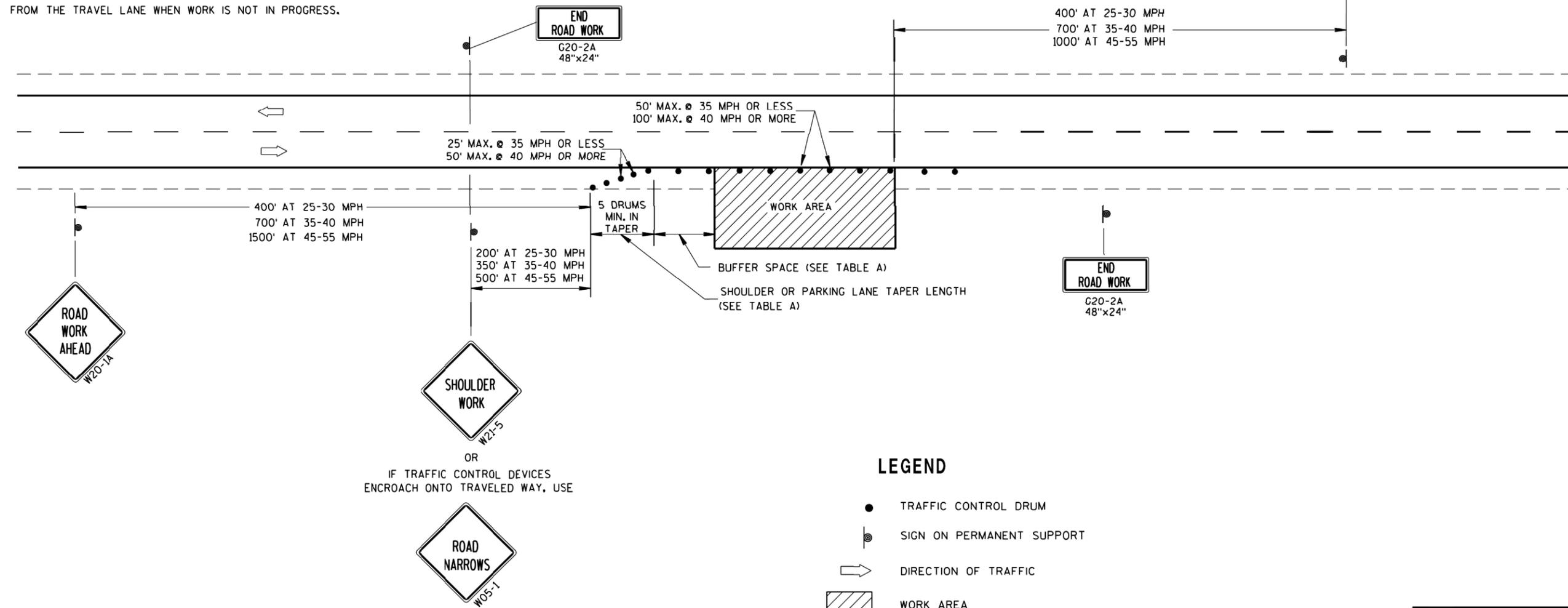
SHOULDER TAPER LENGTH = $\frac{1}{3}L$

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

$L = WS$ AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS



LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

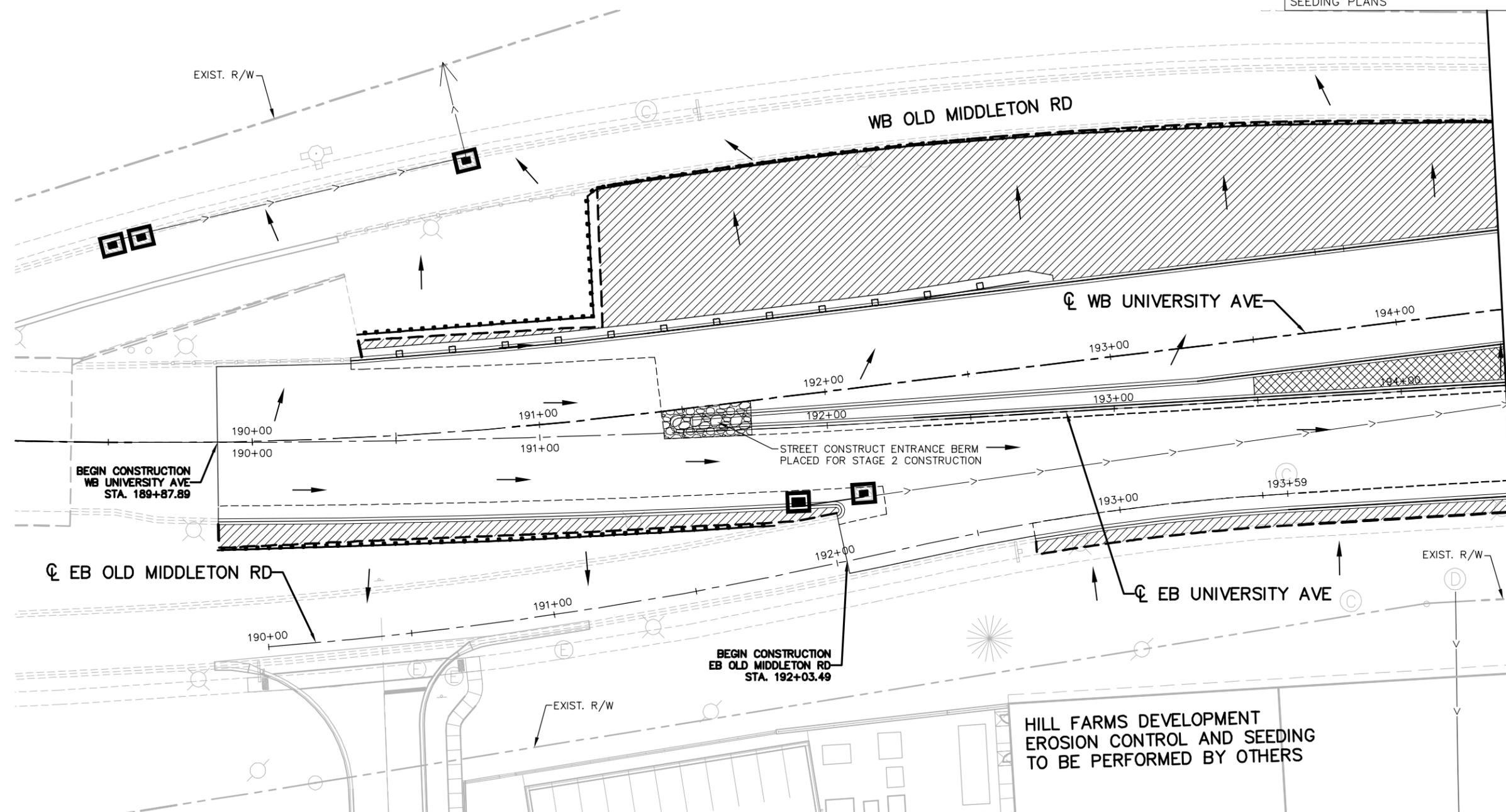
6

6

S.D.D. 15 D 28-3

S.D.D. 15 D 28-3

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED	DATE	DATE
	July 14, 2015	/s/ Peter Amakobe Atepe
	TC-11	STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FWHA		

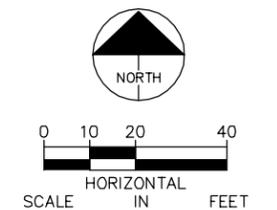


LEGEND

- TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 4 INCHES (PAID AS ITEM 20221-TOPSOIL)
- TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 12 INCHES (PAID AS ITEM 20221-TOPSOIL)
- SILT FENCE-COMplete
- INLET PROTECTION, TYPE D-COMplete
- FLOW DIRECTION ARROW

TEMPORARY EROSION CONTROL NOTES:

1. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED BY THE END OF THE WORKING DAY, OR AS OFTEN TO ENSURE PUBLIC SAFETY. STREET SWEEPING MAY BE REQUIRED MULTIPLE TIMES THROUGHOUT THE DAY WITH AN ABSOLUTE MINIMUM THAT ALL STREETS ARE CLEAN AT THE END OF THE WORK DAY. COMPLETED WORK SHALL BE PAID FOR AS A LUMP SUM PER BID ITEM 21013 - STREET SWEEPING.
2. INLET PROTECTION WILL BE PROVIDED AT ALL CATCH BASINS (EXISTING AND PROPOSED) WITHIN THE PROJECT AREA AND SHALL BE INSTALLED PER WDNr CONSERVATION PRACTICE 1060 - STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES.
3. THE CONTRACTOR SHALL STORE AND PROTECT STOCKPILED MATERIAL IN SUCH A MANNER THAT WILL NOT RESULT IN TRANSPORTATION OF SAID MATERIAL BY STORM WATER RUNOFF INTO ADJACENT STREETS OR DRAINAGE FACILITIES.
4. BACKFILLED TRENCHES AND OTHER AREAS SHALL BE LEFT TO THE LEVEL OF THE ADJACENT AREA OR SLIGHTLY BELOW UNTIL RESTORED TO REDUCE THE POTENTIAL FOR EROSION.
5. SILT FENCE SHALL FOLLOW, AS CLOSE AS POSSIBLE, TO A SINGLE CONTOUR LINE AND SHALL BE INSTALLED PER THE WDNr CONSERVATION PRACTICE 1056 - SILT FENCE.
6. THE CONTRACTOR SHALL CONTINUE EROSION CONTROL INSPECTION ON A PROJECT UNTIL A MINIMUM OF 70% VEGETATION ESTABLISHMENT HAS BEEN OBTAINED OR OTHER PERMANENT SURFACE RESTORATION HAS OCCURRED AS DETERMINED BY THE CONSTRUCTION MANAGER (MATTING, PAVEMENT, SOD, ETC.).

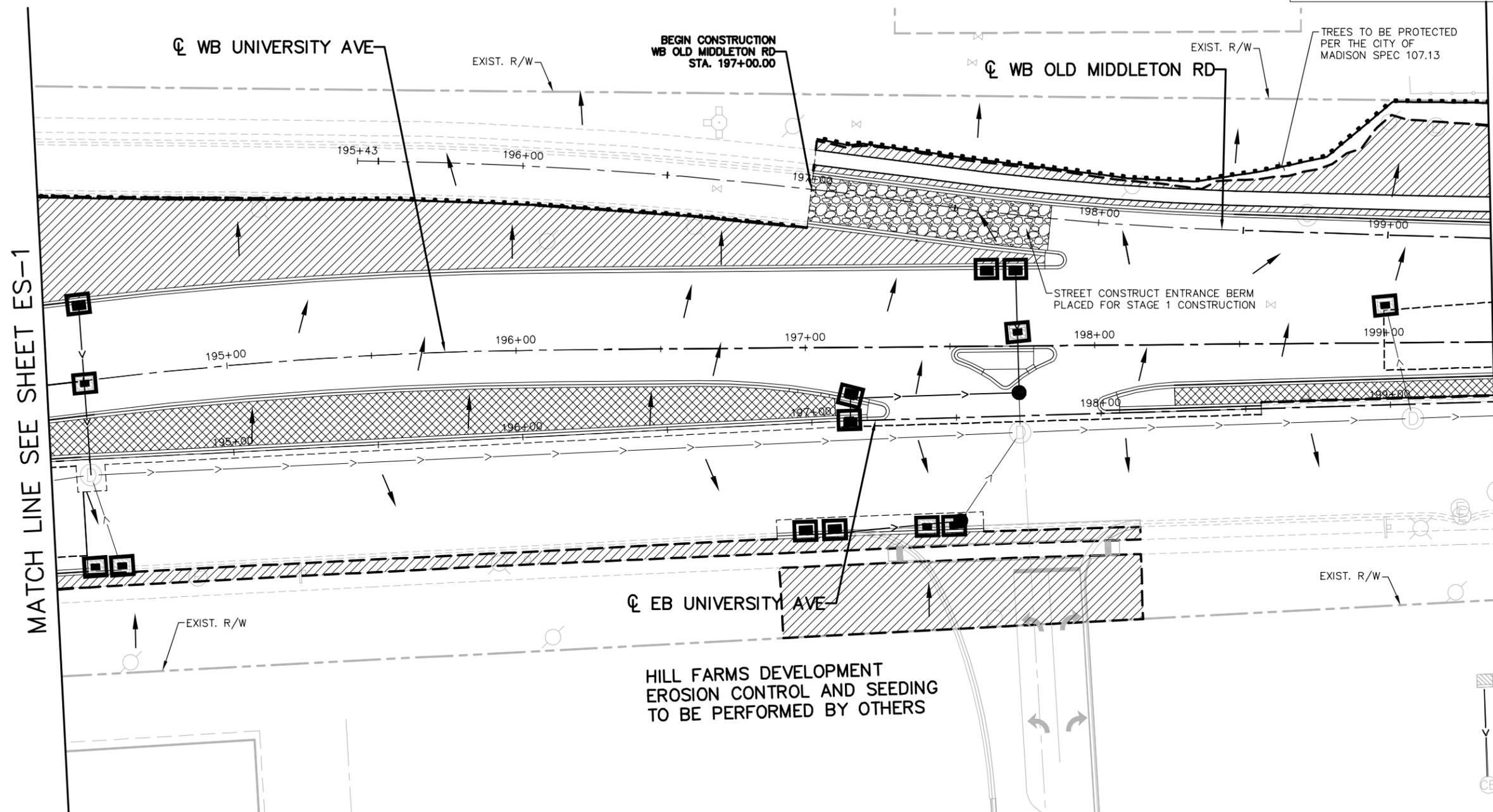


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

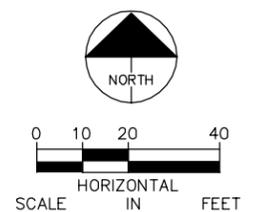


LEGEND

-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 4 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 12 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  SILT FENCE-COMplete
-  INLET PROTECTION, TYPE D-COMplete
-  FLOW DIRECTION ARROW

TEMPORARY EROSION CONTROL NOTES:

1. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED BY THE END OF THE WORKING DAY, OR AS OFTEN TO ENSURE PUBLIC SAFETY. STREET SWEEPING MAY BE REQUIRED MULTIPLE TIMES THROUGHOUT THE DAY WITH AN ABSOLUTE MINIMUM THAT ALL STREETS ARE CLEAN AT THE END OF THE WORK DAY. COMPLETED WORK SHALL BE PAID FOR AS A LUMP SUM PER BID ITEM 21013 - STREET SWEEPING.
2. INLET PROTECTION WILL BE PROVIDED AT ALL CATCH BASINS (EXISTING AND PROPOSED) WITHIN THE PROJECT AREA AND SHALL BE INSTALLED PER WDNr CONSERVATION PRACTICE 1060 - STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES.
3. THE CONTRACTOR SHALL STORE AND PROTECT STOCKPILED MATERIAL IN SUCH A MANNER THAT WILL NOT RESULT IN TRANSPORTATION OF SAID MATERIAL BY STORM WATER RUNOFF INTO ADJACENT STREETS OR DRAINAGE FACILITIES.
4. BACKFILLED TRENCHES AND OTHER AREAS SHALL BE LEFT TO THE LEVEL OF THE ADJACENT AREA OR SLIGHTLY BELOW UNTIL RESTORED TO REDUCE THE POTENTIAL FOR EROSION.
5. SILT FENCE SHALL FOLLOW, AS CLOSE AS POSSIBLE, TO A SINGLE CONTOUR LINE AND SHALL BE INSTALLED PER THE WDNr CONSERVATION PRACTICE 1056 - SILT FENCE.
6. THE CONTRACTOR SHALL CONTINUE EROSION CONTROL INSPECTION ON A PROJECT UNTIL A MINIMUM OF 70% VEGETATION ESTABLISHMENT HAS BEEN OBTAINED OR OTHER PERMANENT SURFACE RESTORATION HAS OCCURRED AS DETERMINED BY THE CONSTRUCTION MANAGER (MATTING, PAVEMENT, SOD, ETC.).

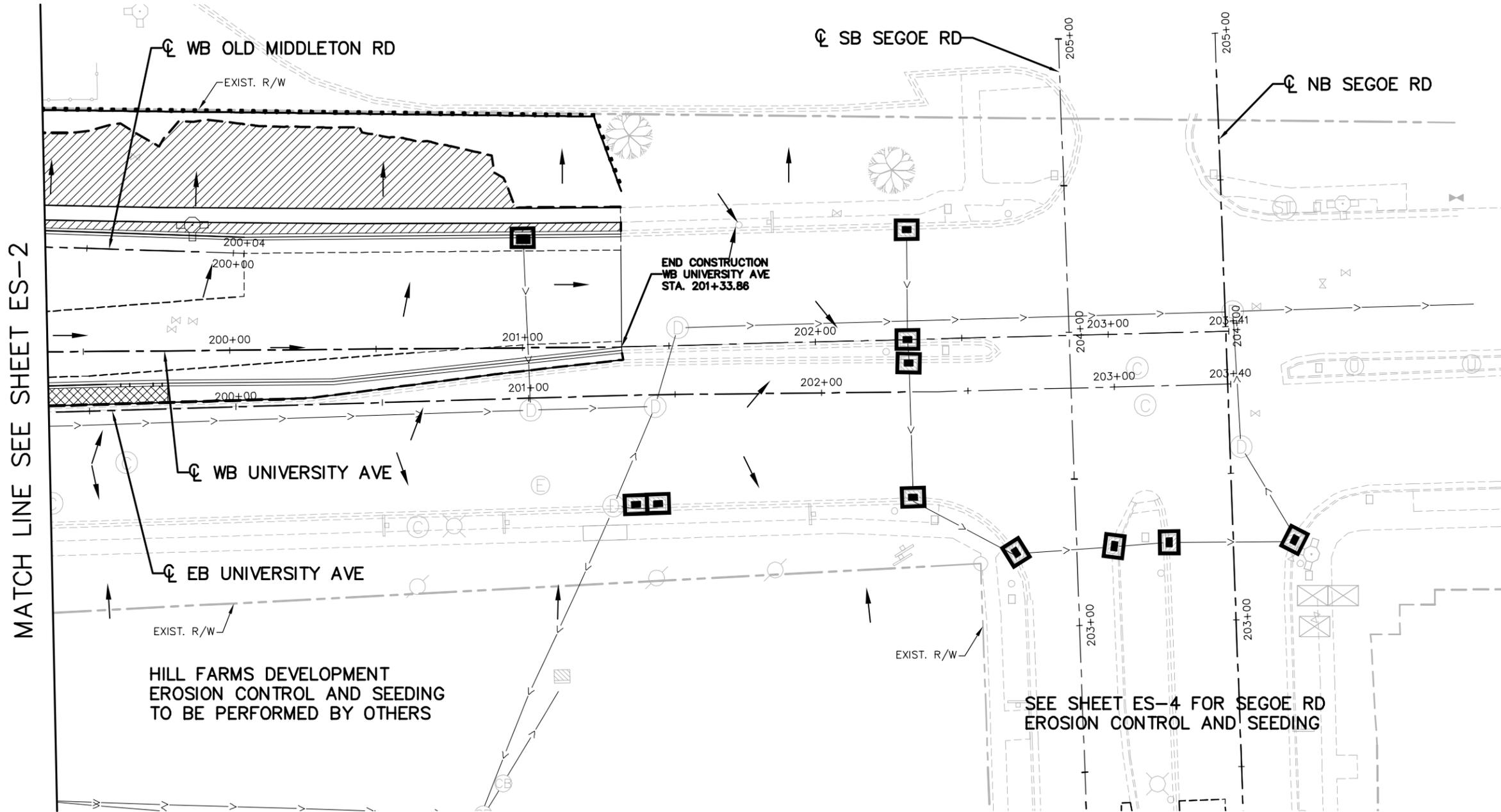


PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET ES-2

HILL FARMS DEVELOPMENT
EROSION CONTROL AND SEEDING
TO BE PERFORMED BY OTHERS

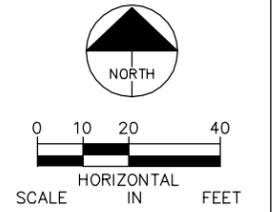
SEE SHEET ES-4 FOR SEGOE RD
EROSION CONTROL AND SEEDING

LEGEND

-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 4 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 12 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  SILT FENCE-COMplete
-  INLET PROTECTION, TYPE D-COMplete
-  FLOW DIRECTION ARROW

TEMPORARY EROSION CONTROL NOTES:

1. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED BY THE END OF THE WORKING DAY, OR AS OFTEN TO ENSURE PUBLIC SAFETY. STREET SWEEPING MAY BE REQUIRED MULTIPLE TIMES THROUGHOUT THE DAY WITH AN ABSOLUTE MINIMUM THAT ALL STREETS ARE CLEAN AT THE END OF THE WORK DAY. COMPLETED WORK SHALL BE PAID FOR AS A LUMP SUM PER BID ITEM 21013 - STREET SWEEPING.
2. INLET PROTECTION WILL BE PROVIDED AT ALL CATCH BASINS (EXISTING AND PROPOSED) WITHIN THE PROJECT AREA AND SHALL BE INSTALLED PER WDNr CONSERVATION PRACTICE 1060 - STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES.
3. THE CONTRACTOR SHALL STORE AND PROTECT STOCKPILED MATERIAL IN SUCH A MANNER THAT WILL NOT RESULT IN TRANSPORTATION OF SAID MATERIAL BY STORM WATER RUNOFF INTO ADJACENT STREETS OR DRAINAGE FACILITIES.
4. BACKFILLED TRENCHES AND OTHER AREAS SHALL BE LEFT TO THE LEVEL OF THE ADJACENT AREA OR SLIGHTLY BELOW UNTIL RESTORED TO REDUCE THE POTENTIAL FOR EROSION.
5. SILT FENCE SHALL FOLLOW, AS CLOSE AS POSSIBLE, TO A SINGLE CONTOUR LINE AND SHALL BE INSTALLED PER THE WDNr CONSERVATION PRACTICE 1056 - SILT FENCE.
6. THE CONTRACTOR SHALL CONTINUE EROSION CONTROL INSPECTION ON A PROJECT UNTIL A MINIMUM OF 70% VEGETATION ESTABLISHMENT HAS BEEN OBTAINED OR OTHER PERMANENT SURFACE RESTORATION HAS OCCURRED AS DETERMINED BY THE CONSTRUCTION MANAGER (MATTING, PAVEMENT, SOD, ETC.).

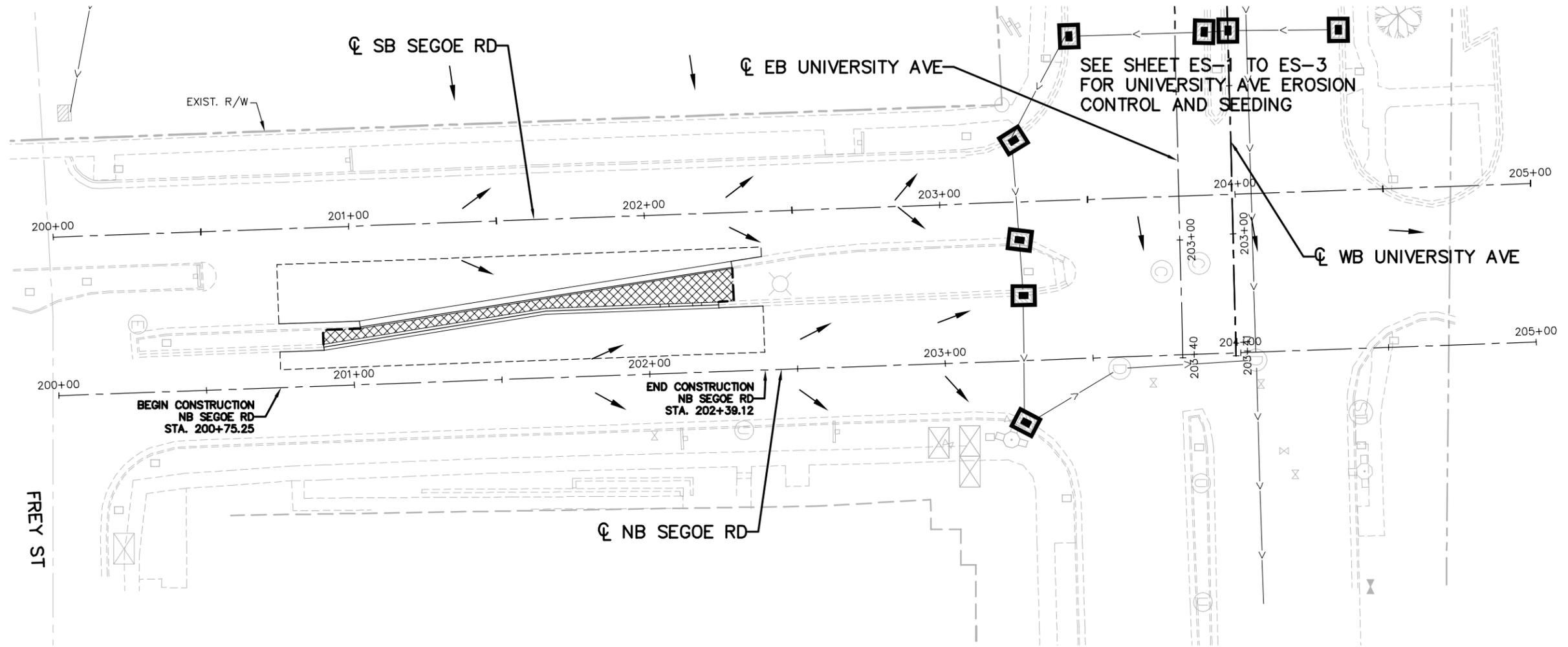


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

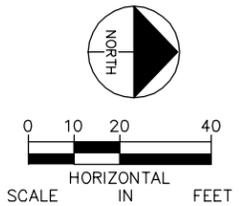


LEGEND

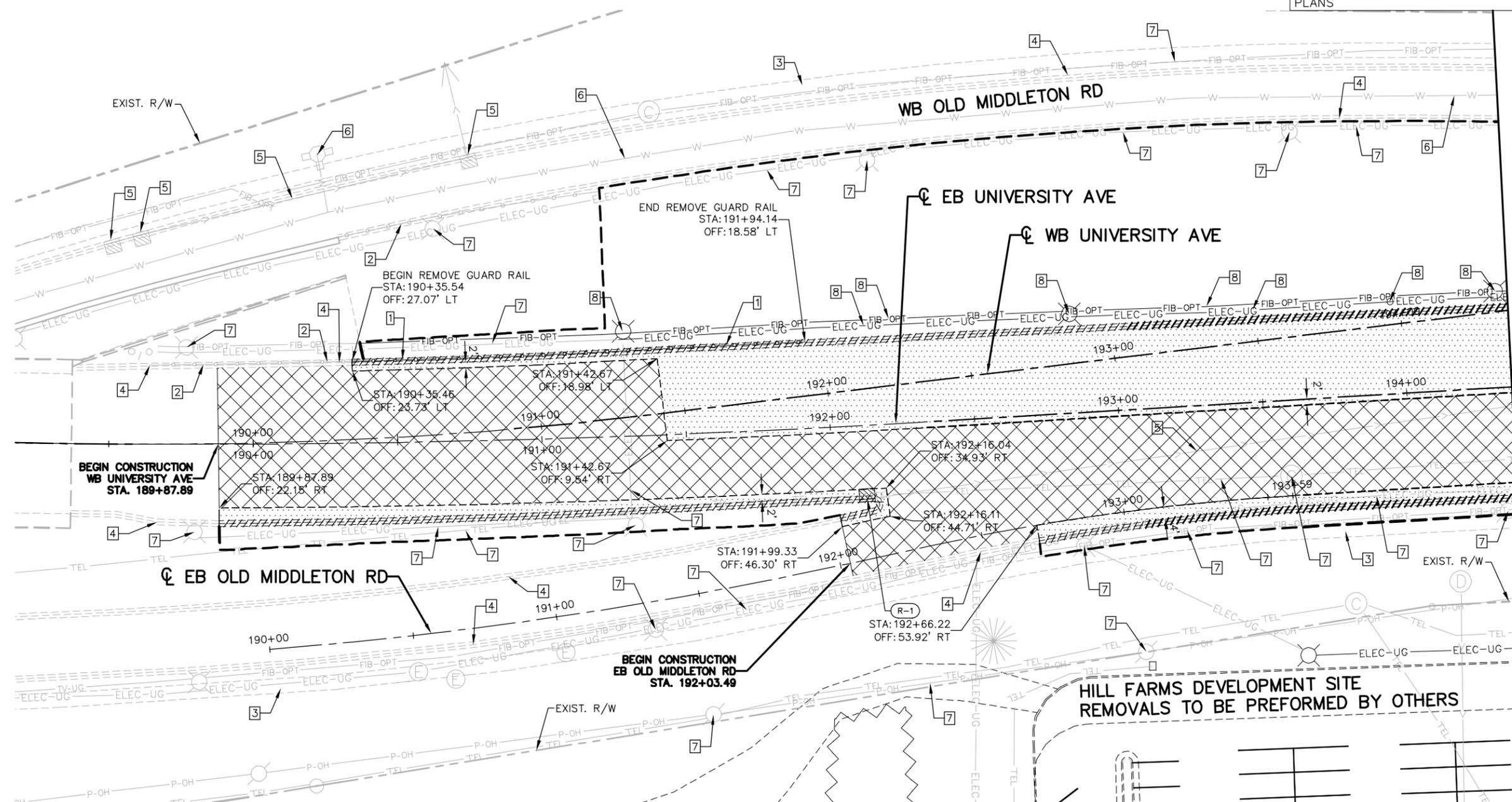
-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 4 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  TEMPORARY SEEDING (SEED OATS)
TERRACE SEEDING (SUN MIX)
EROSION MATTING, CLASS II, TYPE C-ORGANIC
TOPSOIL - 12 INCHES (PAID AS ITEM 20221-TOPSOIL)
-  SILT FENCE-COMplete
-  INLET PROTECTION, TYPE D-COMplete
-  FLOW DIRECTION ARROW

TEMPORARY EROSION CONTROL NOTES:

1. ALL STREETS IN AND ADJACENT TO THE PROJECT SHALL REMAIN CLEAN AND PASSABLE AT ALL TIMES. ALL SEDIMENT AND DEBRIS SHALL BE REMOVED BY THE END OF THE WORKING DAY, OR AS OFTEN TO ENSURE PUBLIC SAFETY. STREET SWEEPING MAY BE REQUIRED MULTIPLE TIMES THROUGHOUT THE DAY WITH AN ABSOLUTE MINIMUM THAT ALL STREETS ARE CLEAN AT THE END OF THE WORK DAY. COMPLETED WORK SHALL BE PAID FOR AS A LUMP SUM PER BID ITEM 21013 - STREET SWEEPING.
2. INLET PROTECTION WILL BE PROVIDED AT ALL CATCH BASINS (EXISTING AND PROPOSED) WITHIN THE PROJECT AREA AND SHALL BE INSTALLED PER WDNR CONSERVATION PRACTICE 1060 - STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES.
3. THE CONTRACTOR SHALL STORE AND PROTECT STOCKPILED MATERIAL IN SUCH A MANNER THAT WILL NOT RESULT IN TRANSPORTATION OF SAID MATERIAL BY STORM WATER RUNOFF INTO ADJACENT STREETS OR DRAINAGE FACILITIES.
4. BACKFILLED TRENCHES AND OTHER AREAS SHALL BE LEFT TO THE LEVEL OF THE ADJACENT AREA OR SLIGHTLY BELOW UNTIL RESTORED TO REDUCE THE POTENTIAL FOR EROSION.
5. SILT FENCE SHALL FOLLOW, AS CLOSE AS POSSIBLE, TO A SINGLE CONTOUR LINE AND SHALL BE INSTALLED PER THE WDNR CONSERVATION PRACTICE 1056 - SILT FENCE.
6. THE CONTRACTOR SHALL CONTINUE EROSION CONTROL INSPECTION ON A PROJECT UNTIL A MINIMUM OF 70% VEGETATION ESTABLISHMENT HAS BEEN OBTAINED OR OTHER PERMANENT SURFACE RESTORATION HAS OCCURRED AS DETERMINED BY THE CONSTRUCTION MANAGER (MATTING, PAVEMENT, SOD, ETC.).



PLOT SCALE: _____
 PLOT NAME: _____
 REV. DATE: _____
 ORIGINATOR : KIMLEY HORN AND ASSOCIATES



REMOVAL NOTES LEGEND

- 1 REMOVE GUARD RAIL
- 2 PROTECT EXISTING GUARD RAIL
- 3 PROTECT EXISTING CONCRETE SIDEWALK
- 4 PROTECT EXISTING CURB & GUTTER
- 5 PROTECT EXISTING STORM SEWER
- 6 PROTECT EXISTING WATERMAIN
- 7 PROTECT EXISTING UTILITY
- 8 REMOVE ELECTRICAL EQUIPMENT. SEE ELECTRICAL SHEETS.

LEGEND

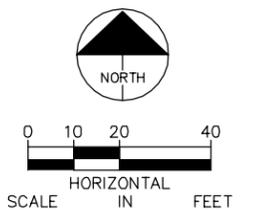
- REMOVE ASPHALT SURFACE (INCIDENTAL)
- FULL WIDTH GRINDING (2" DEPTH)
- REMOVE CONCRETE SIDEWALK & DRIVE
- CLEARING & GRUBBING
- REMOVE TREE (CLEAR AND GRUB)
- REMOVE CONCRETE CURB & GUTTER
- EXISTING UTILITY NOTE
- SAWCUT BITUMINOUS PAVEMENT, FULL DEPTH
- LIMITS OF CONSTRUCTION

GENERAL REMOVAL NOTES

1. CONTRACTOR SHALL CALL DIGGERS HOTLINE 811. ALL UTILITIES MUST BE LOCATED PRIOR TO THE START OF CONSTRUCTION.
2. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO C WB UNIVERSITY AVE UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
4. TRENCH BOXES OR OTHER TRENCH STABILIZATION METHODS MAY BE REQUIRED DURING CONSTRUCTION TO MINIMIZE REMOVAL LIMITS.
5. CONTRACTOR TO VERIFY REMOVAL LIMITS WITH CONSTRUCTION MANAGER PRIOR TO SAWCUTTING, INCLUDING TREE REMOVALS.
6. SEE SHEET U-1 FOR STORM SEWER ADJUSTMENT SCHEDULE AND SHEET U-2 UTILITY ADJUSTMENT SCHEDULE.

UTILITY NOTES:

1. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF INPLACE SUBSURFACE UTILITY DATA".
2. SEE SHEETS SR-1 TO SR-4 FOR REMOVING AND MOVING EXISTING TRAFFIC SIGNS.
3. SEE ELECTRICAL SHEETS FOR REMOVING AND RELOCATING TRAFFIC SIGNAL EQUIPMENT AND STREET LIGHTING.



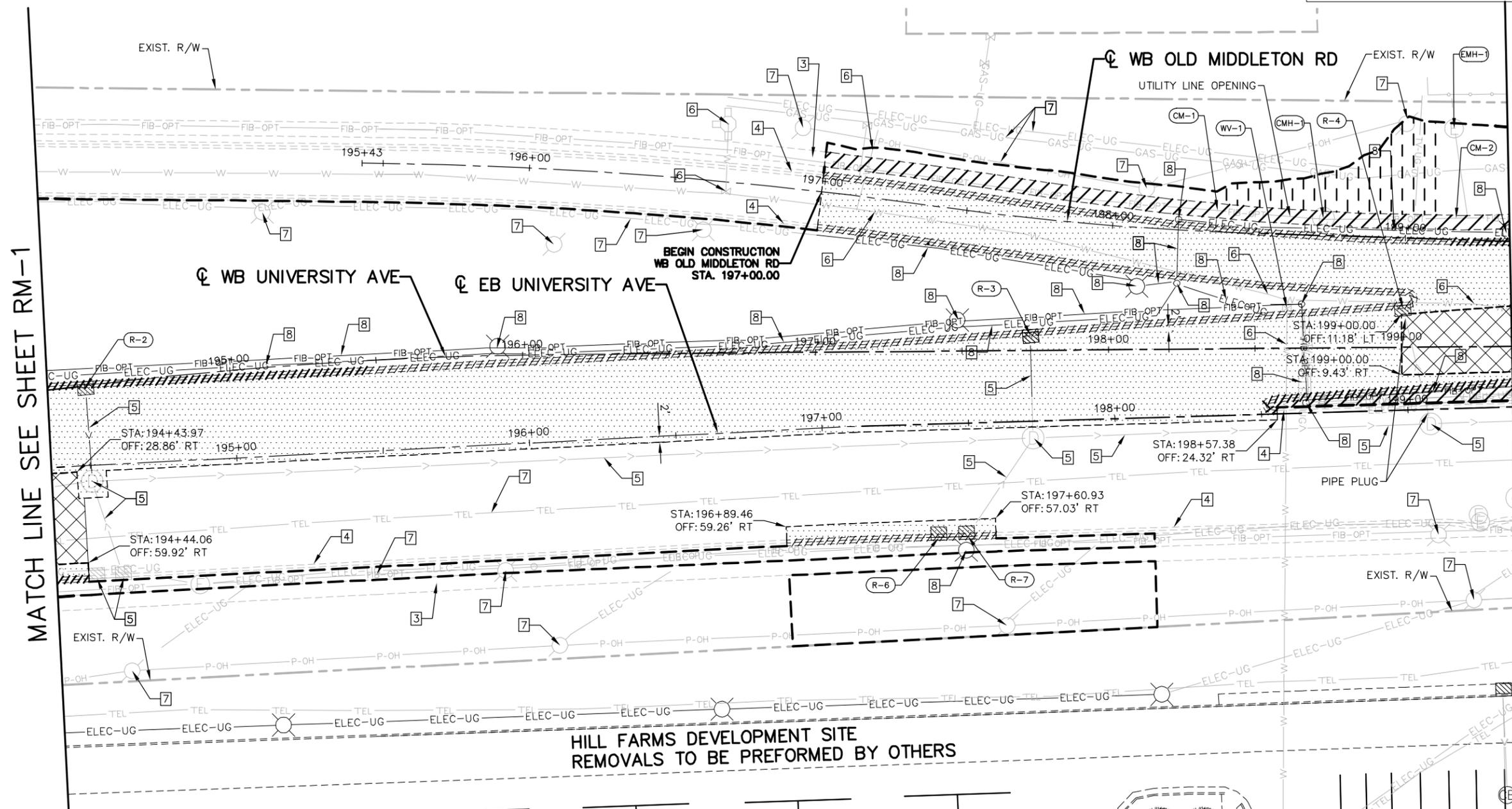
MATCH LINE SEE SHEET RM-2

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET RM-1

MATCH LINE SEE SHEET RM-3

REMOVAL NOTES LEGEND

- 1 REMOVE GUARD RAIL
- 2 PROTECT EXISTING GUARD RAIL
- 3 PROTECT EXISTING CONCRETE SIDEWALK
- 4 PROTECT EXISTING CURB & GUTTER
- 5 PROTECT EXISTING STORM SEWER
- 6 PROTECT EXISTING WATERMAIN
- 7 PROTECT EXISTING UTILITY
- 8 REMOVE ELECTRICAL EQUIPMENT. SEE ELECTRICAL SHEETS.

LEGEND

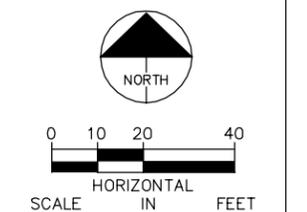
- REMOVE ASPHALT SURFACE (INCIDENTAL)
- FULL WIDTH GRINDING (2" DEPTH)
- REMOVE CONCRETE SIDEWALK & DRIVE
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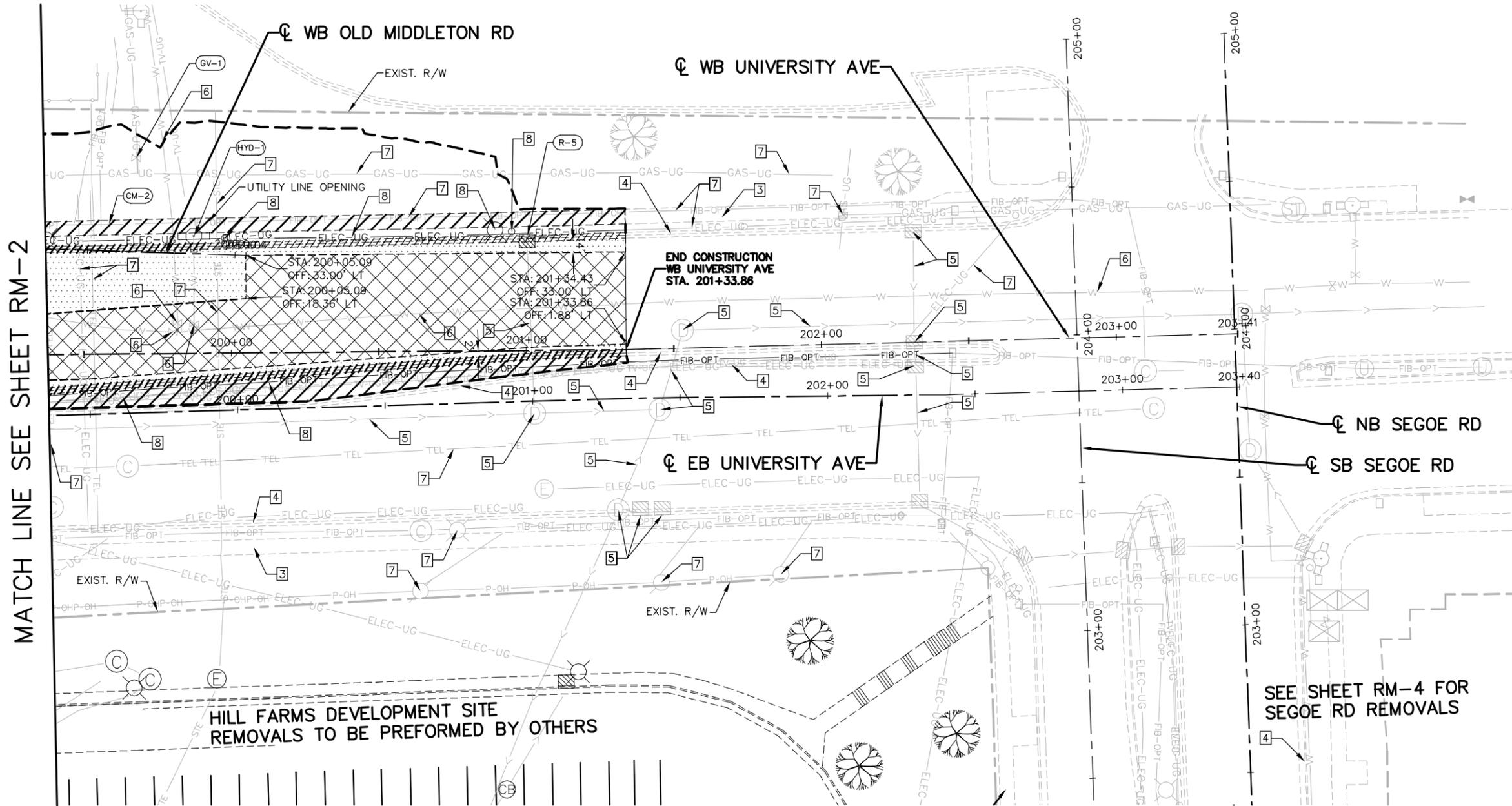


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET RM-2

SEE SHEET RM-4 FOR
SEGOE RD REMOVALS

REMOVAL NOTES LEGEND

- 1 REMOVE GUARD RAIL
- 2 PROTECT EXISTING GUARD RAIL
- 3 PROTECT EXISTING CONCRETE SIDEWALK
- 4 PROTECT EXISTING CURB & GUTTER
- 5 PROTECT EXISTING STORM SEWER
- 6 PROTECT EXISTING WATERMAIN
- 7 PROTECT EXISTING UTILITY
- 8 REMOVE ELECTRICAL EQUIPMENT. SEE ELECTRICAL SHEETS.

LEGEND

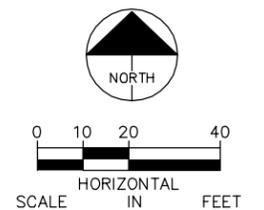
- REMOVE ASPHALT SURFACE (INCIDENTAL)
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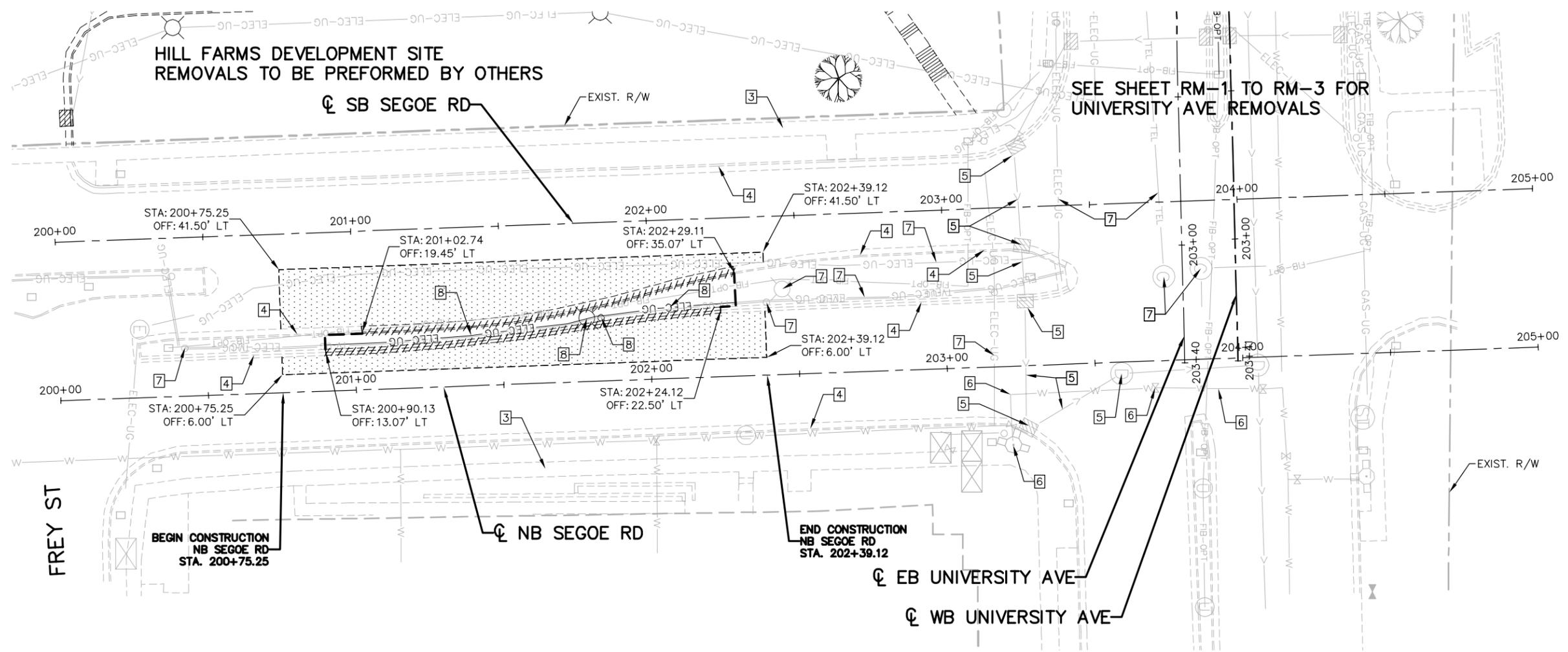


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



REMOVAL NOTES LEGEND

- 1 REMOVE GUARD RAIL
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LEGEND

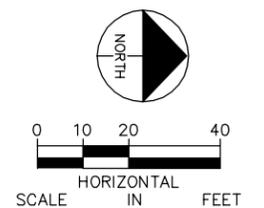
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GENERAL REMOVAL NOTES

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2. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO ϕ NB SEGOE RD UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITY STRUCTURES THAT ARE NOT BEING REMOVED OR RELOCATED.
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PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

LEGEND

- ARCHITECTURAL CONCRETE PAVEMENT 5-INCH
- 5 INCH CONCRETE SIDEWALK
- PAVEMENT INSET A PER SHEET D-3
- PAVEMENT INSET B PER SHEET D-3

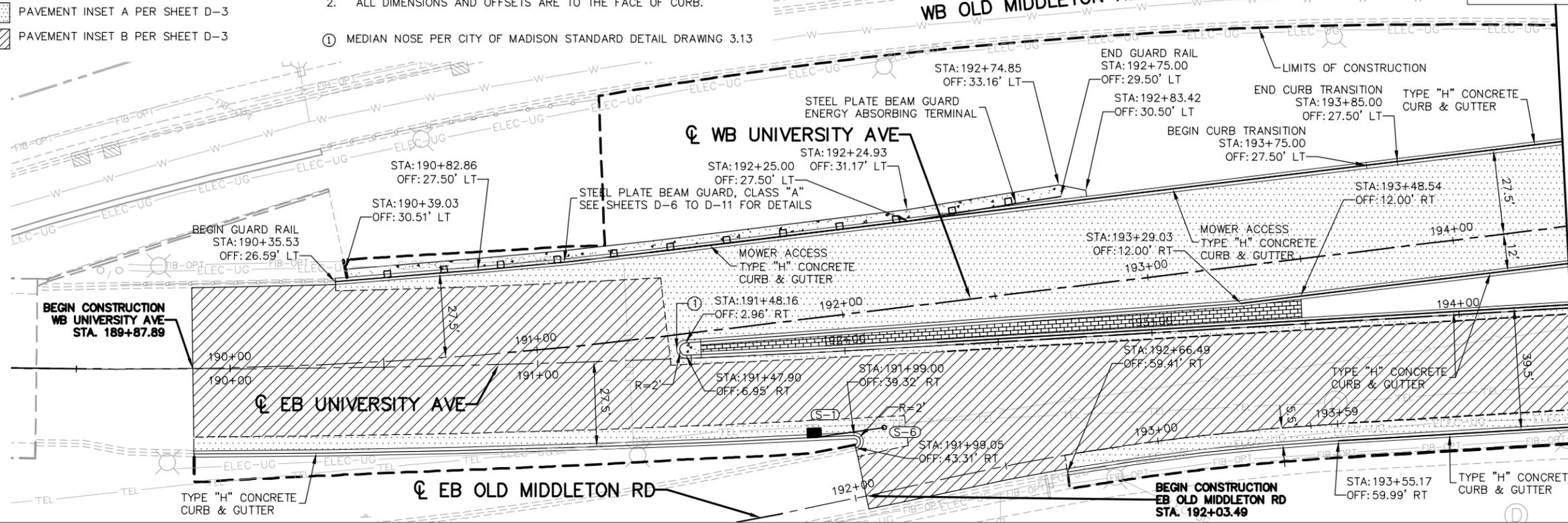
NOTES:

1. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO THE WB UNIVERSITY AVE C.
 2. ALL DIMENSIONS AND OFFSETS ARE TO THE FACE OF CURB.
- ① MEDIAN NOSE PER CITY OF MADISON STANDARD DETAIL DRAWING 3.13

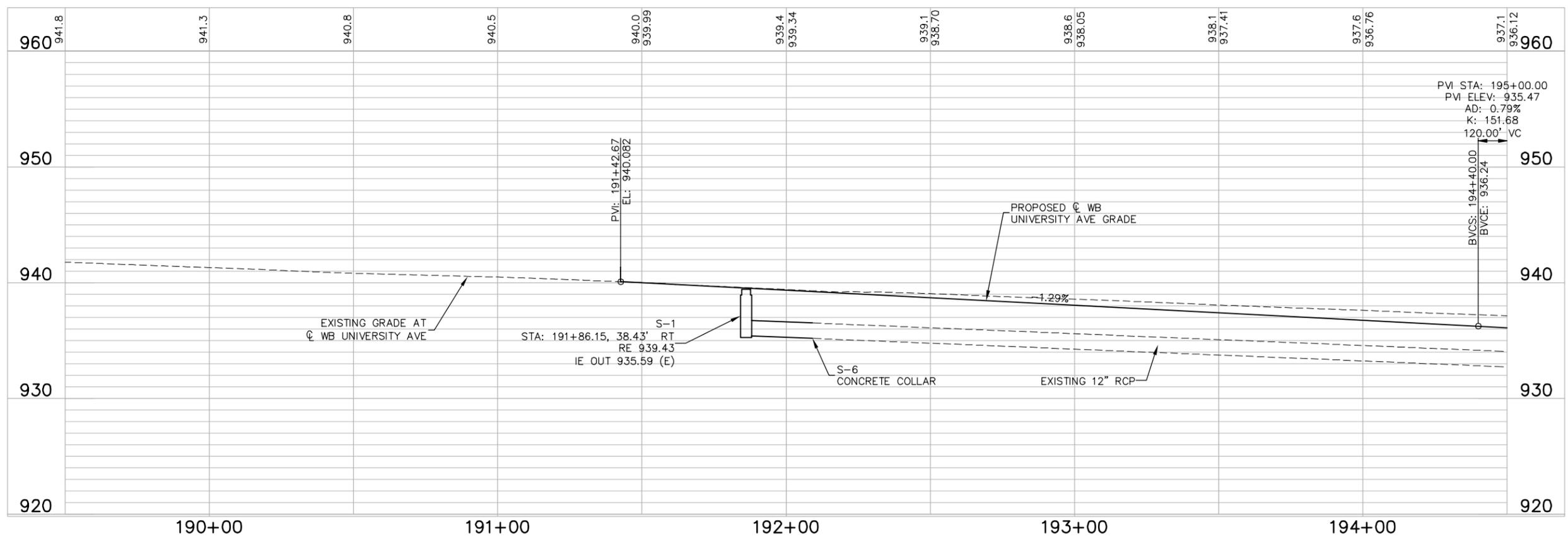
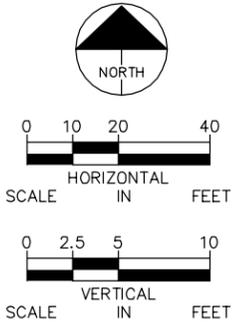
TURN LANE IMPROVEMENTS ON UNIVERSITY AVE.
FOR ACCESS TO HILL FARMS SITE

SHEET NO.
P-1

PROJECT NO. 160114
STREETS & STORM SEWER PLANS CITY OF MADISON



MATCH LINE SEE SHEET P-2



PLOT SCALE:

REV. DATE:

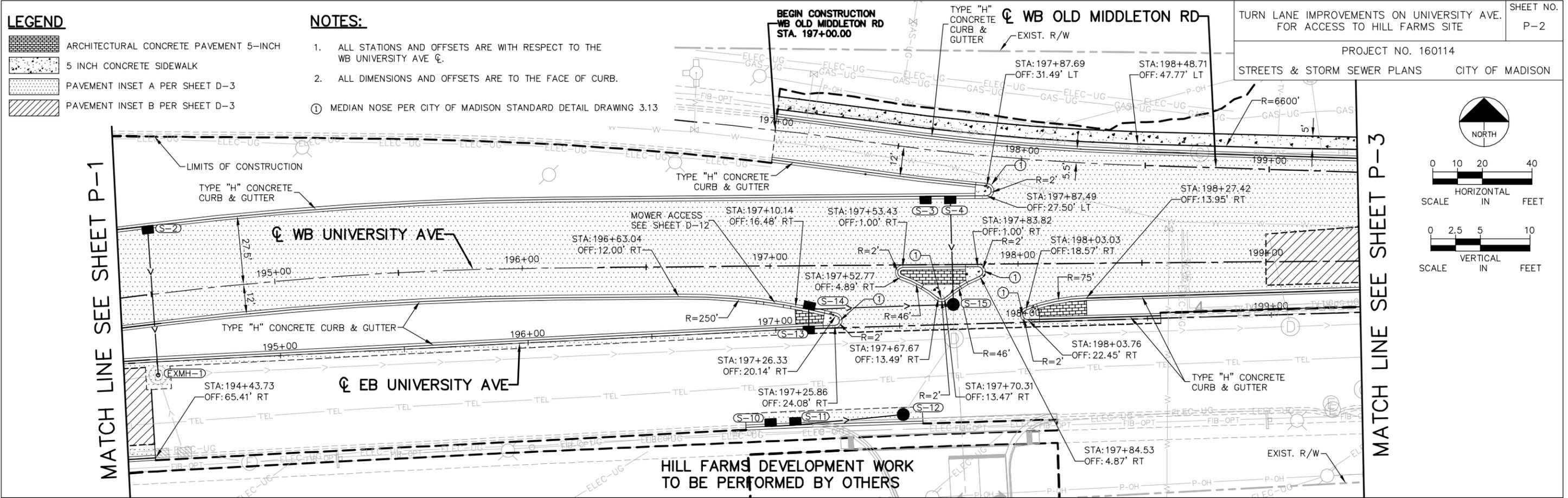
ORIGINATOR : KIMLEY HORN AND ASSOCIATES

LEGEND

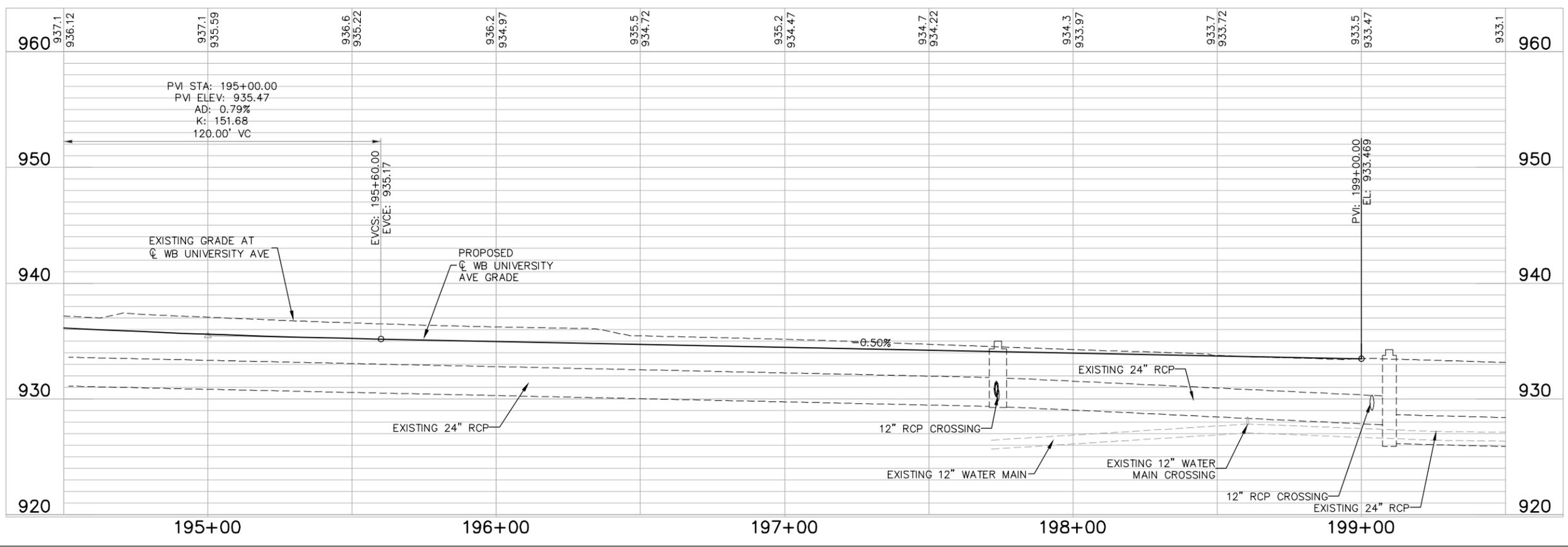
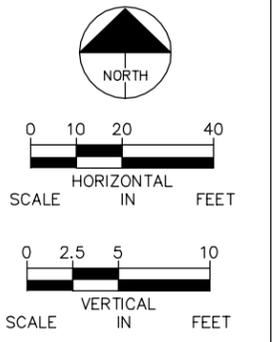
-  ARCHITECTURAL CONCRETE PAVEMENT 5-INCH
-  5 INCH CONCRETE SIDEWALK
-  PAVEMENT INSET A PER SHEET D-3
-  PAVEMENT INSET B PER SHEET D-3

NOTES:

1. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO THE WB UNIVERSITY AVE CL.
2. ALL DIMENSIONS AND OFFSETS ARE TO THE FACE OF CURB.
- ① MEDIAN NOSE PER CITY OF MADISON STANDARD DETAIL DRAWING 3.13

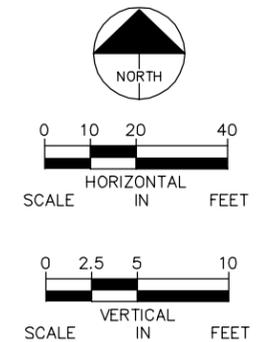
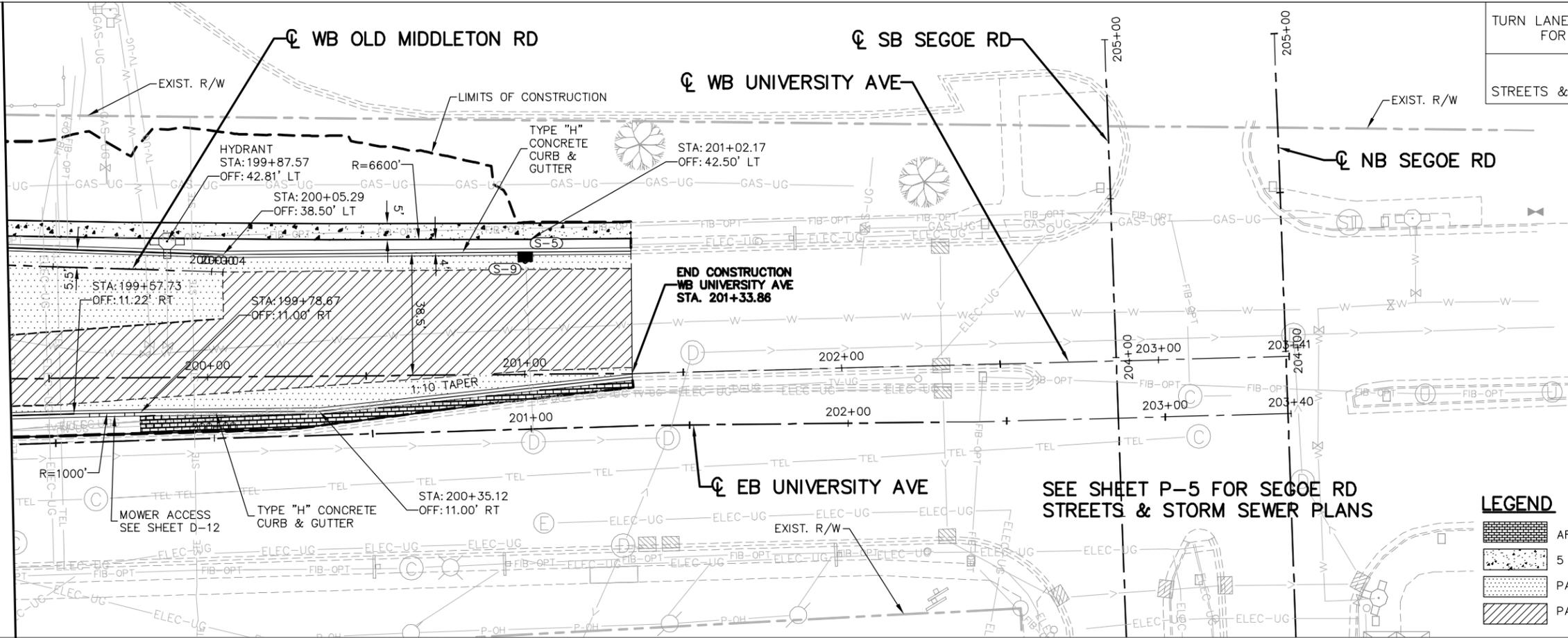


PROJECT NO. 160114
 STREETS & STORM SEWER PLANS
 CITY OF MADISON
 SHEET NO. P-2



PLOT SCALE: _____
 PLOT NAME: _____
 REV. DATE: _____
 ORIGINATOR: KIMLEY HORN AND ASSOCIATES

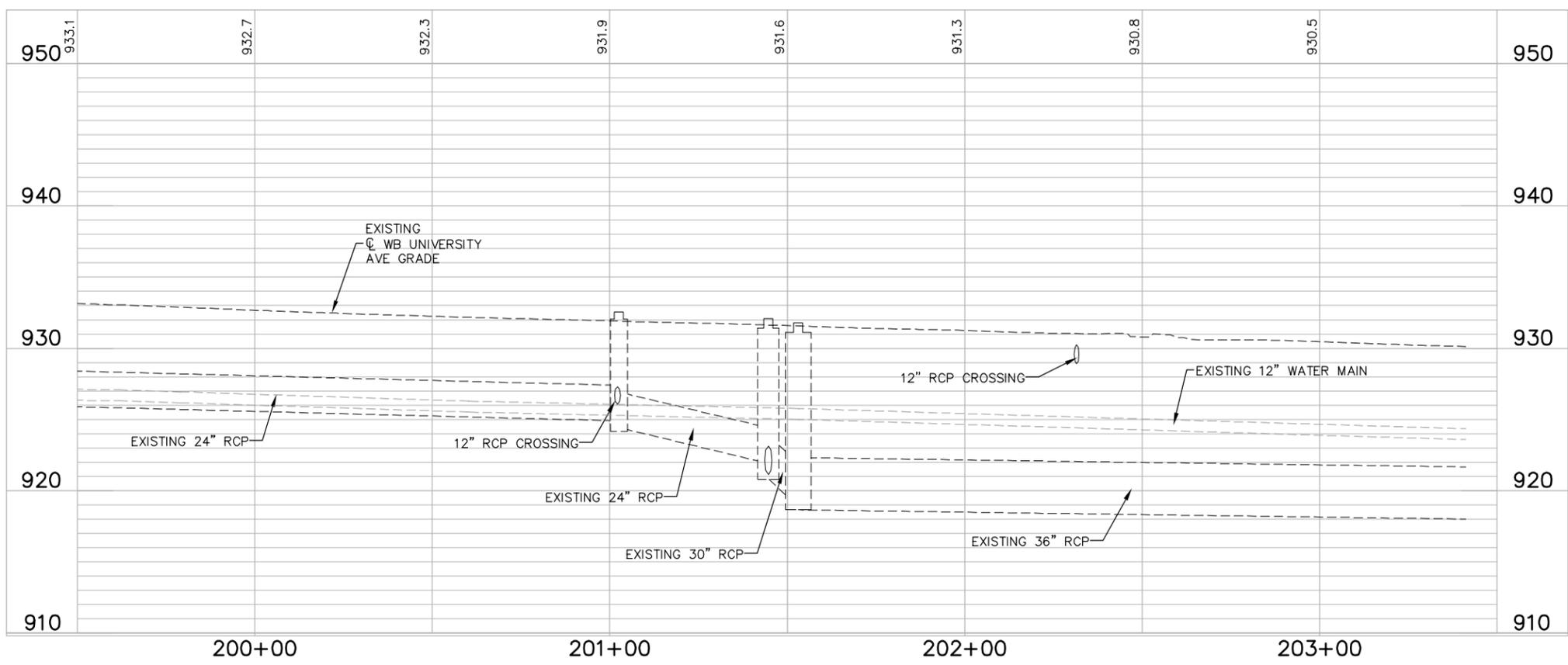
MATCH LINE SEE SHEET P-2



- LEGEND**
- ARCHITECTURAL CONCRETE PAVEMENT 5-INCH
 - 5 INCH CONCRETE SIDEWALK
 - PAVEMENT INSET A PER SHEET D-3
 - PAVEMENT INSET B PER SHEET D-3

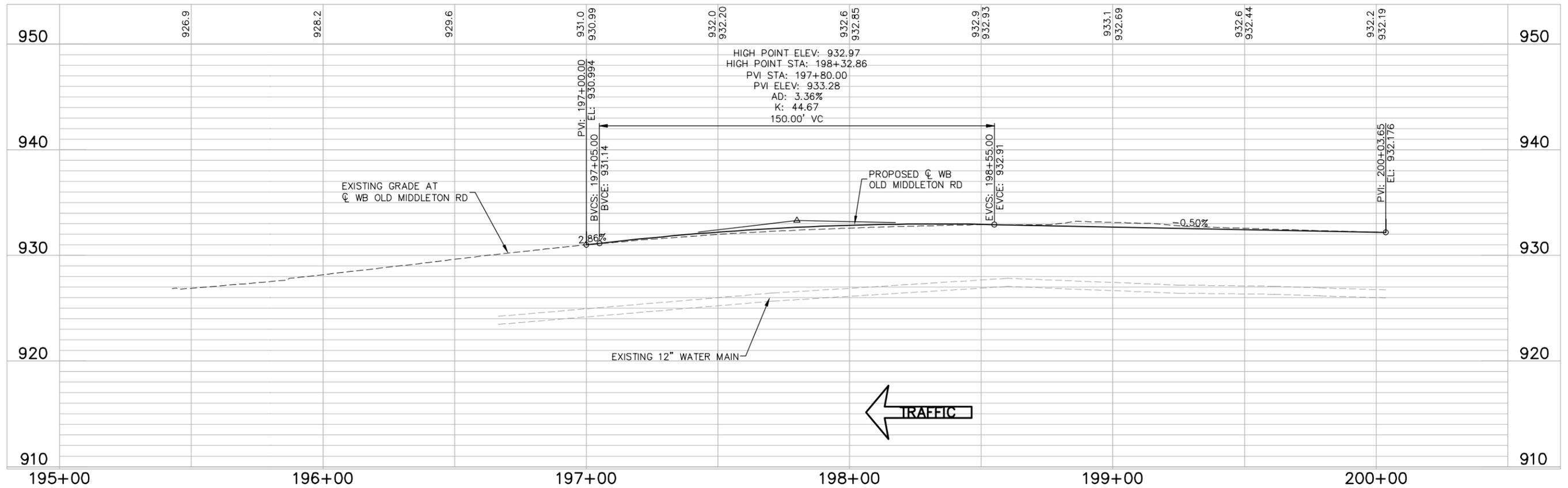
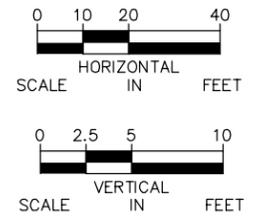
SEE SHEET P-5 FOR SEGOE RD
STREETS & STORM SEWER PLANS

- NOTES:**
1. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO THE WB UNIVERSITY AVE CL.
 2. ALL DIMENSIONS AND OFFSETS ARE TO THE FACE OF CURB.
- ① MEDIAN NOSE PER CITY OF MADISON STANDARD DETAIL DRAWING 3.13



PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____
ORIGINATOR: KIMLEY HORN AND ASSOCIATES

SEE SHEET P-2 FOR WB OLD MIDDLETON RD PLAN VIEW INFORMATION.



PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR: KIMLEY HORN AND ASSOCIATES

HILL FARMS DEVELOPMENT WORK
TO BE PERFORMED BY OTHERS

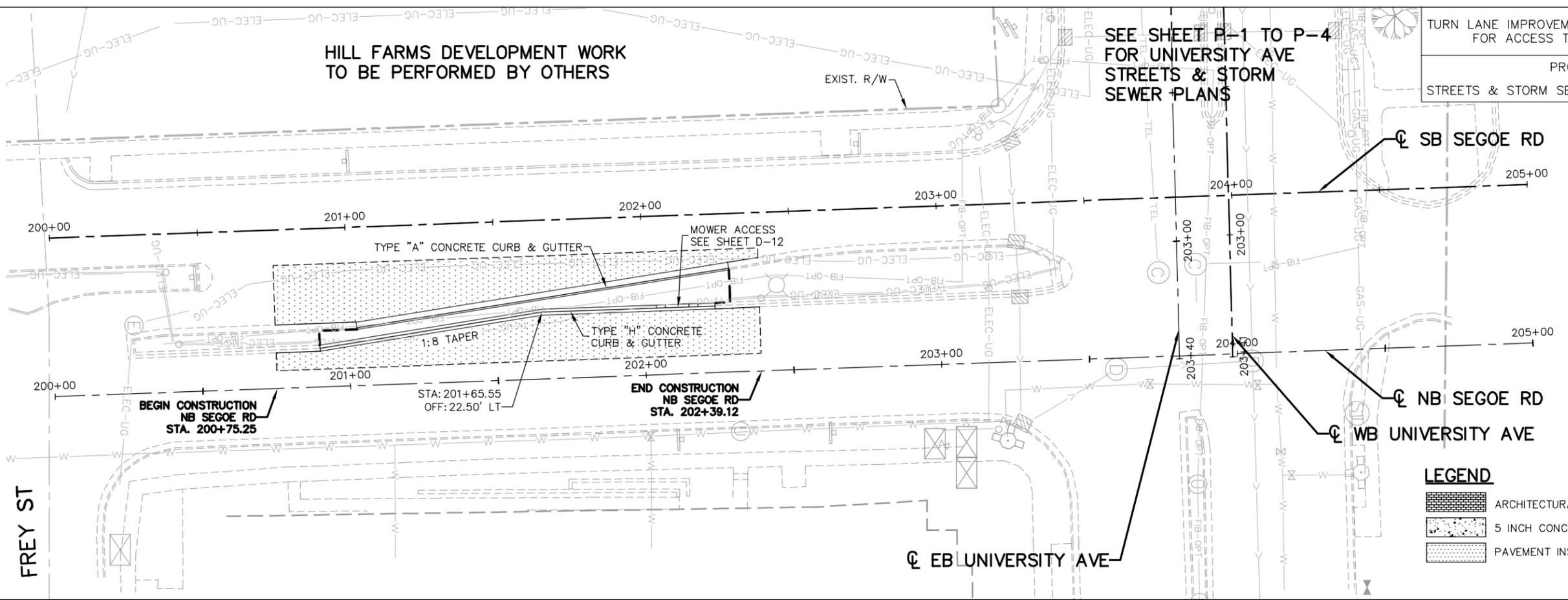
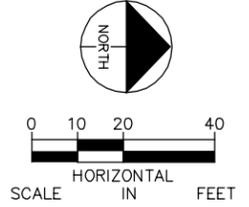
SEE SHEET P-1 TO P-4
FOR UNIVERSITY AVE
STREETS & STORM
SEWER PLANS

TURN LANE IMPROVEMENTS ON UNIVERSITY AVE.
FOR ACCESS TO HILL FARMS SITE

SHEET NO.
P-5

PROJECT NO. 160114

STREETS & STORM SEWER PLANS CITY OF MADISON



LEGEND

-  ARCHITECTURAL CONCRETE PAVEMENT 5-INCH
-  5 INCH CONCRETE SIDEWALK
-  PAVEMENT INSET C PER SHEET D-5

NOTES:

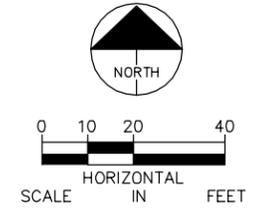
1. ALL STATIONS AND OFFSETS ARE WITH RESPECT TO THE NB SEGOE RD CL.
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- ① MEDIAN NOSE PER CITY OF MADISON STANDARD DETAIL DRAWING 3.13

PLOT SCALE:

PLOT NAME:

REV. DATE:

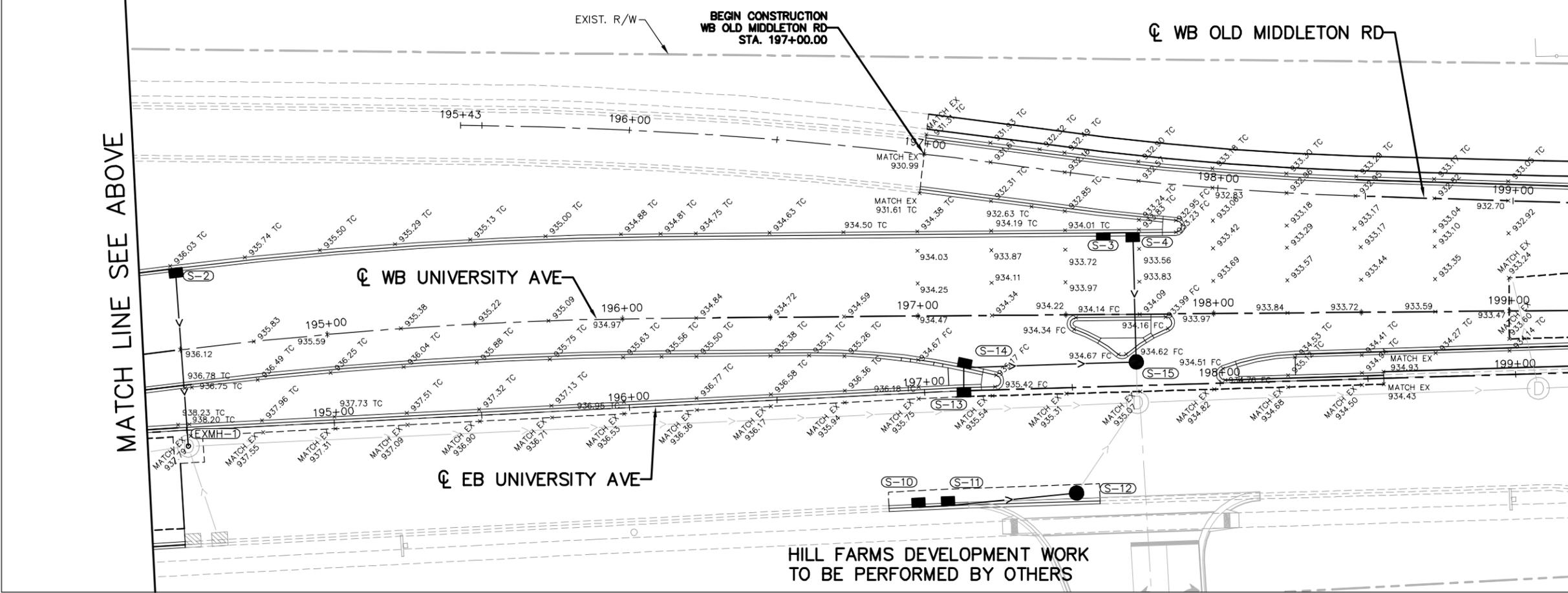
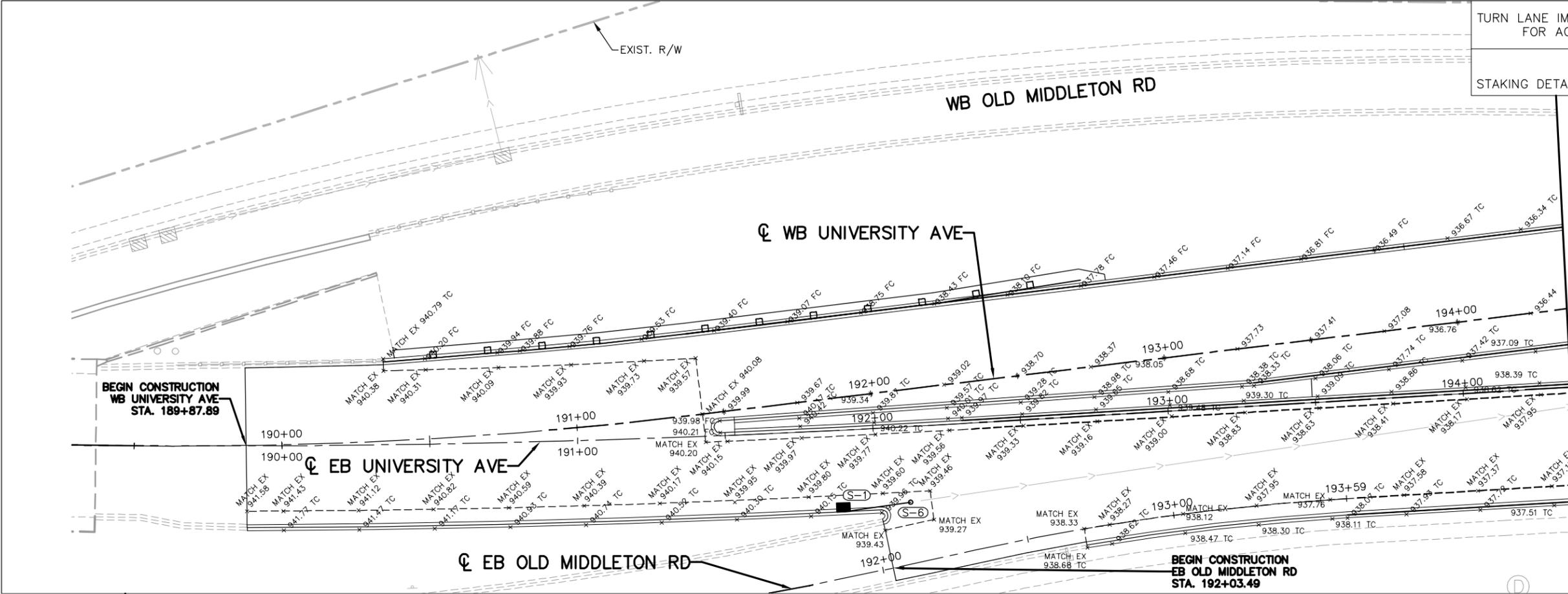
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



- NOTES:**
- ELEVATIONS ARE SHOWN AT 25' INTERVALS WITH RESPECT TO WB UNIVERSITY AVE @.
 - TC = TOP OF CURB ELEVATION.
 - FC = FACE OF CURB ELEVATION.

MATCH LINE SEE BELOW

MATCH LINE SEE SHEET ST-2

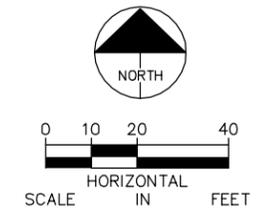


HILL FARMS DEVELOPMENT WORK
TO BE PERFORMED BY OTHERS

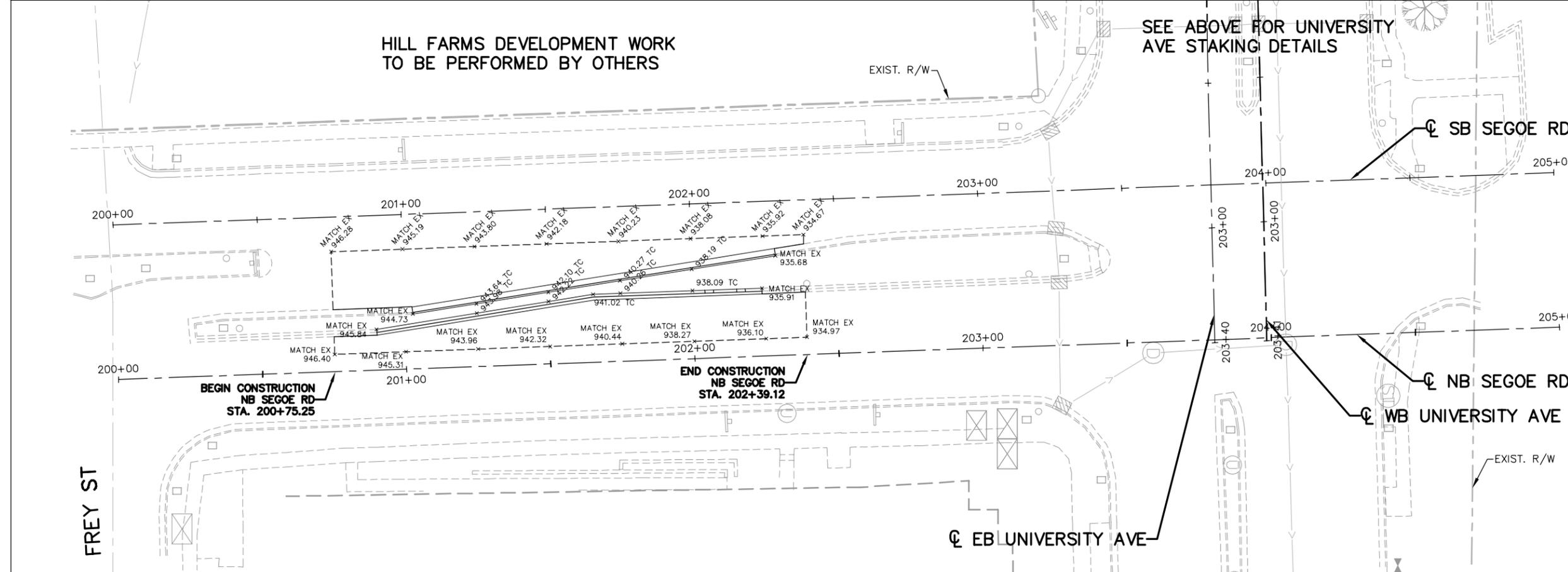
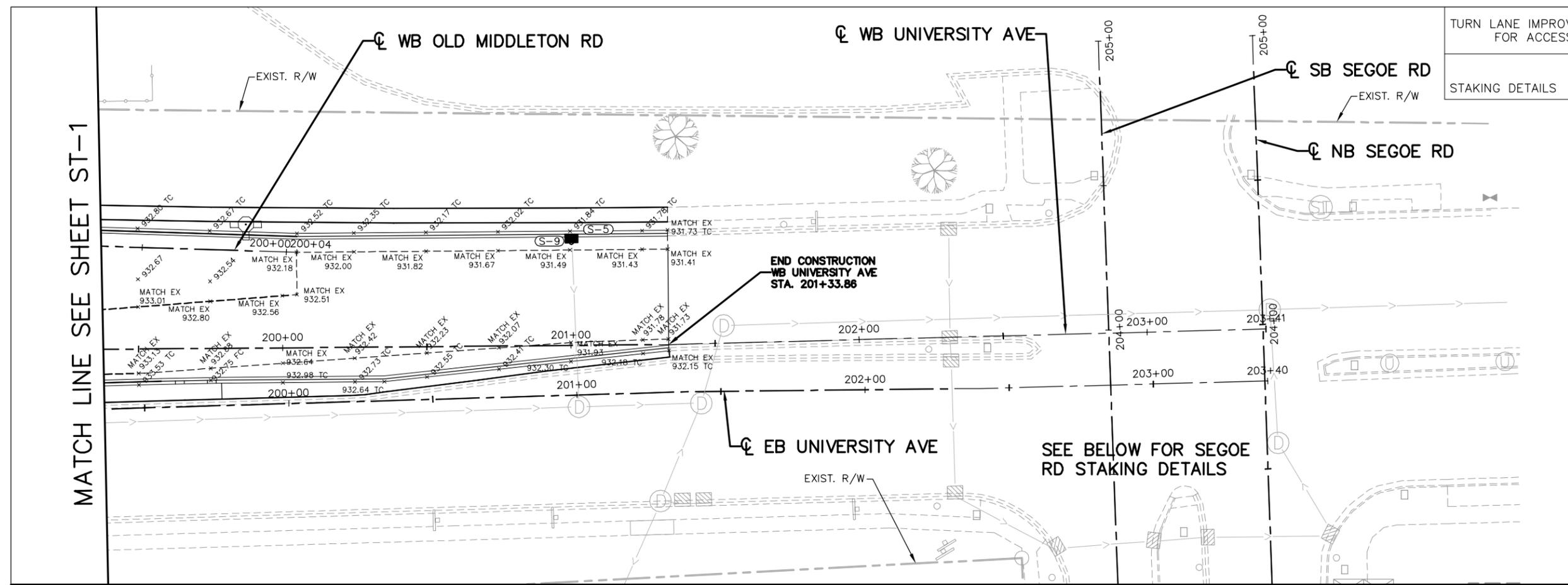
PLOT SCALE:

REV. DATE:

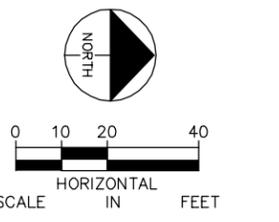
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



- NOTES:**
- ELEVATIONS ARE SHOWN AT 25' INTERVALS WITH RESPECT TO WB UNIVERSITY AVE CL .
 - TC = TOP OF CURB ELEVATION.
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- NOTES:**
- ELEVATIONS ARE SHOWN AT 25' INTERVALS WITH RESPECT TO NB SEGOE RD CL .
 - TC = TOP OF CURB ELEVATION.
 - FC = FACE OF CURB ELEVATION.



MATCH LINE SEE SHEET ST-1

FREY ST

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

STORM SEWER SCHEDULE

STRUCTURES

STRUC. NO.	ALIGNMENT NAME	STATION	OFFSET WIDTH (FT)	OFFSET SIDE (LT OR RT)	TYPE	TOP OF CASTING	E. I.	DEPTH (FT)	NOTES:
S-1	WB UNIVERSITY AVE	191+86.15	38.43	RT	TYPE "H" INLET	940.07	935.59	4.48	INSTALL SALVAGED CASTING; FIELD POURED
S-2	WB UNIVERSITY AVE	194+51.66	27.50	LT	TYPE "H" INLET	936.01	932.42	3.59	INSTALL SALVAGED CASTING; FIELD POURED
S-3	WB UNIVERSITY AVE	197+62.93	27.50	LT	TYPE "H" INLET	933.92	930.62	3.30	INSTALL SALVAGED CASTING; FIELD POURED
S-4	WB UNIVERSITY AVE	197+72.85	27.50	LT	PRECAST SAS	933.85	930.47	3.38	INSTALL SALVAGED CASTING; FIELD POURED
S-5	WB UNIVERSITY AVE	201+00.53	38.50	LT	TYPE "H" INLET	931.82	927.09	4.73	INSTALL SALVAGED CASTING; FIELD POURED
S-6	WB UNIVERSITY AVE	192+09.06	37.92	RT	CONCRETE COLLAR	DNA	935.36	DNA	
S-7					LEFT BLANK INTENTIONALLY				
S-8					LEFT BLANK INTENTIONALLY				
S-9	WB UNIVERSITY AVE	201+00.52	35.68	LT	CONCRETE COLLAR	DNA	926.98	DNA	
S-10	WB UNIVERSITY AVE	196+99.70	64.42	RT	TYPE "H" INLET	935.31	931.65	3.66	INSTALL SALVAGED CASTING; FIELD POURED
S-11	WB UNIVERSITY AVE	197+09.69	64.04	RT	PRECAST SAS	935.25	931.45	3.80	INSTALL SALVAGED CASTING; FIELD POURED
S-12	WB UNIVERSITY AVE	197+53.16	60.12	RT	PRECAST SAS	934.48	930.83	3.65	
S-13	WB UNIVERSITY AVE	197+15.33	24.30	RT	TYPE "H" INLET	936.05	931.66	4.39	
S-14	WB UNIVERSITY AVE	197+15.38	17.54	RT	PRECAST SAS	935.11	931.49	3.62	FURNISH AND INSTALL WITH R-3067 CASTING
S-15	WB UNIVERSITY AVE	197+73.72	16.07	RT	PRECAST SAS	934.80	930.17	4.63	

STORM STRUCTURE REMOVALS

STRUC. NO.	ALIGNMENT NAME	STATION	OFFSET WIDTH (FT)	OFFSET SIDE (LT OR RT)	TYPE	NOTES:
R-1	WB UNIVERSITY AVE	192+09.06	37.92	RT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-2	WB UNIVERSITY AVE	194+50.39	0.46	LT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-3	WB UNIVERSITY AVE	197+73.29	6.18	LT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-4	WB UNIVERSITY AVE	199+00.36	14.25	LT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-5	WB UNIVERSITY AVE	201+00.53	38.36	LT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-6	WB UNIVERSITY AVE	197+41.54	63.36	RT	TYPE "H" INLET	SALVAGE EXISTING CASTING
R-7	WB UNIVERSITY AVE	197+51.10	63.13	RT	PRECAST SAS	SALVAGE EXISTING CASTING

SPECIFIC NOTES

PIPES

PIPE NO.	FROM (UPSTM)	TO (DNSTM)	LENGTH (FT)	INLET E. I.	DISCH. E. I.	SLOPE (%)	PIPE SIZE (IN)	TYPE	NOTES:
P-1	S-1	S-6	22.91	935.59	935.36	1.02	12	RCP	
P-2	S-2	EXMH-1	60.13	932.42	932.12	0.50	12	RCP	
P-3	S-3	S-4	9.93	930.62	930.57	0.50	12	RCP	
P-4	S-4	S-15	43.58	930.47	930.29	0.41	12	RCP	
P-5	S-5	S-9	2.82	927.09	926.98	3.87	12	RCP	
P-6	S-10	S-11	10.00	931.65	931.55	1.00	12	RCP	
P-7	S-11	S-12	43.64	931.45	931.01	1.00	12	RCP	
P-8	S-13	S-14	6.76	931.66	931.59	1.00	12	RCP	
P-9	S-14	S-15	58.35	931.49	930.29	2.06	12	RCP	

STORM PIPES REMOVALS

REMOVE FROM	REMOVE TO	LENGTH (FT)	PAID (Y/N)	SIZE (IN)	TYPE	NOTES:
R-1	S-6	1.0	YES	12	RCP	CUT END OF PIPE TO MAKE FLUSH FOR NEW PIPE AND COLLAR CONNECTION
R-2	EXMH-1	33.0	YES	12	RCP	CUT END OF PIPE TO MAKE FLUSH FOR NEW PIPE AND COLLAR CONNECTION
R-3	S-15	22.0	YES	12	RCP	
R-4	DNA	0.0	NO	12	RCP	PLUG PIPE
R-5	S-9	1.0	YES	12	RCP	CUT END OF PIPE TO MAKE FLUSH FOR NEW PIPE AND COLLAR CONNECTION
R-6	R-7	9.5	YES	12	RCP	
R-7	S-12	6.0	YES	12	RCP	

STANDARD NOTES:

- ABBREVIATIONS:
RCP = REINFORCED CONCRETE PIPE
DNA = DOES NOT APPLY
SAS = SEWER ACCESS STRUCTURE
- APPROXIMATE DISCHARGE E.I. GIVEN, ADJUST E.I. AND PIPE SLOPE IN THE FIELD.
- TOP OF CASTING GRADE GIVEN IS THE TOP OF CURB FOR INLET STRUCTURES AND THE FLOWLINE OF THE CLOSED CASTING FOR SAS's.
- ALL REINFORCED CONCRETE PIPES TO BE CLASS V UNLESS OTHERWISE NOTED.
- SURVEYOR TO CONFIRM THAT ALL INLET STATION/OFFSETS LINE UP WITH PROPOSED CURB AND GUTTER.
- ALL STRUCTURES CALLED OUT AS FIELD POURED SHALL BE FIELD POURED. ALL OTHER STRUCTURES (NOT INDICATED AS FIELD POURED) SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR APPROVAL IF PRECAST STRUCTURES ARE PREFERRED.
- EXISTING TYPE "H" INLET CASTINGS ARE TO BE SALVAGED AND INSTALLED AT THE LOCATIONS SHOW ON THE PLANS.

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

EXISTING UTILITY ADJUSTMENT SCHEDULE

STRUCTURES

STRUC. NO.	ALIGNMENT NAME	STATION	OFFSET WIDTH (FT)	OFFSET SIDE (LT OR RT)	UTILITY TYPE	REMOVE	ADJUST	RELOCATE	EXISTING TOP OF CASTING	PROPOSED TOP OF CASTING	ADJUST HEIGHT (FT)	NOTES
WV-1	WB UNIVERSITY AVE	198+60.96	13.5	LT	WATER VALVE		X		933.88	933.34	-0.54	REPLACE WITH NEW TOP SECTION AND LID
HYD-1	WB UNIVERSITY AVE	199+87.57	39.65	LT	HYDRANT			X				RELOCATE TO STA. 199+87.57, OFF. 42.81' LT
CMH-1	WB UNIVERSITY AVE	198+73.73	44.17	LT	COMMUNICATIONS MH			X				BY OTHERS
EMH-1	WB UNIVERSITY AVE	199+18.52	74.27	LT	ELECTRIC MH		X		923.28	923.91	0.63	PAID AS BID ITEM 20506, "ADJUST SEWER ACCESS STRUCTURE CASTING"
CM-1	WB UNIVERSITY AVE	197+94.43 - 198+73.74	51.04 - 43.72	LT	COMMUNICATION LINE			X				BY OTHERS
CM-2	WB UNIVERSITY AVE	198+73.74 - 201+33.25	43.72 - 46.5	LT	COMMUNICATION LINE			X				BY OTHERS
GV-1	WB UNIVERSITY AVE	199+68.30	66.18	LT	GAS VALVE		X		925.78	926.5	0.72	BY OTHERS

SPECIFIC NOTES

STANDARD NOTES:

- ABBREVIATIONS:

WV =	WATER VALVE
HYD =	HYDRANT
CM =	COMMUNICATION LINE
CMH =	COMMUNICATIONS MANHOLE
EMH =	ELECTRIC MANHOLE
GV =	GAS VALVE

- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CII/ASCE 38-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

- WISCONSIN STATUTE 182.0175 REQUIRES EVERY EXCAVATOR AND EVERYONE WHO IS RESPONSIBLE FOR PLANNING NON-EMERGENCY EXCAVATIONS TO PROVIDE ADVANCE NOTICE OF AT LEAST THREE BUSINESS DAYS TO THE ONE-CALL SYSTEM. DIGGERS HOTLINE NEEDS TO BE CONTACTED, AT (800) 242-8511, PRIOR TO EXCAVATION AND PLANNING AN EXCAVATION IN ORDER TO COMPLY WITH THE STATE STATUTE.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. LOCATING UTILITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, COORDINATING FIELD LOCATES, CONTACTING ALL UTILITY OWNERS, AND POTHOLES UTILITIES AS NECESSARY FOR THE PROPOSED CONSTRUCTION. LOCATING EXISTING UTILITIES SHALL BE INCIDENTAL. POTHOLES EXISTING UTILITIES SHALL BE PAID AS BID ITEM 50801 "UTILITY LINE OPENING."

- THE CONTRACTOR IS ADVISED THAT PRIVATE UTILITIES EXIST WITHIN THE PROJECT LIMITS BUT MAY NOT BE LOCATED BY DIGGERS HOTLINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES ON THE PROJECT SITE AS WELL AS CONTACTING AND COORDINATING WITH EACH RESPECTIVE UTILITY OWNER TO DETERMINE THE EXTENT OF ANY UTILITY RELOCATIONS.

- ALL EXISTING UTILITY WORK TABULATED ON THIS PLAN SHALL BE COMPLETED BY THE CONTRACTOR UNLESS OTHERWISE NOTED, BUT MAY NOT DESCRIBE THE WORK IN ITS ENTIRETY. THE CONTRACTOR SHALL COORDINATE AND VERIFY THE EXTENTS OF THE UTILITY WORK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE BASED UPON THE BEST INFORMATION AVAILABLE AND MAY NOT REFLECT ACTUAL CONSTRUCT CONFLICTS. THE CONTRACTOR SHALL MAKE ACTUAL DETERMINATIONS IN THE FIELD.

- SEE STORM SEWER SCHEDULE FOR MODIFICATIONS TO THE EXISTING STORM SEWER SYSTEM.

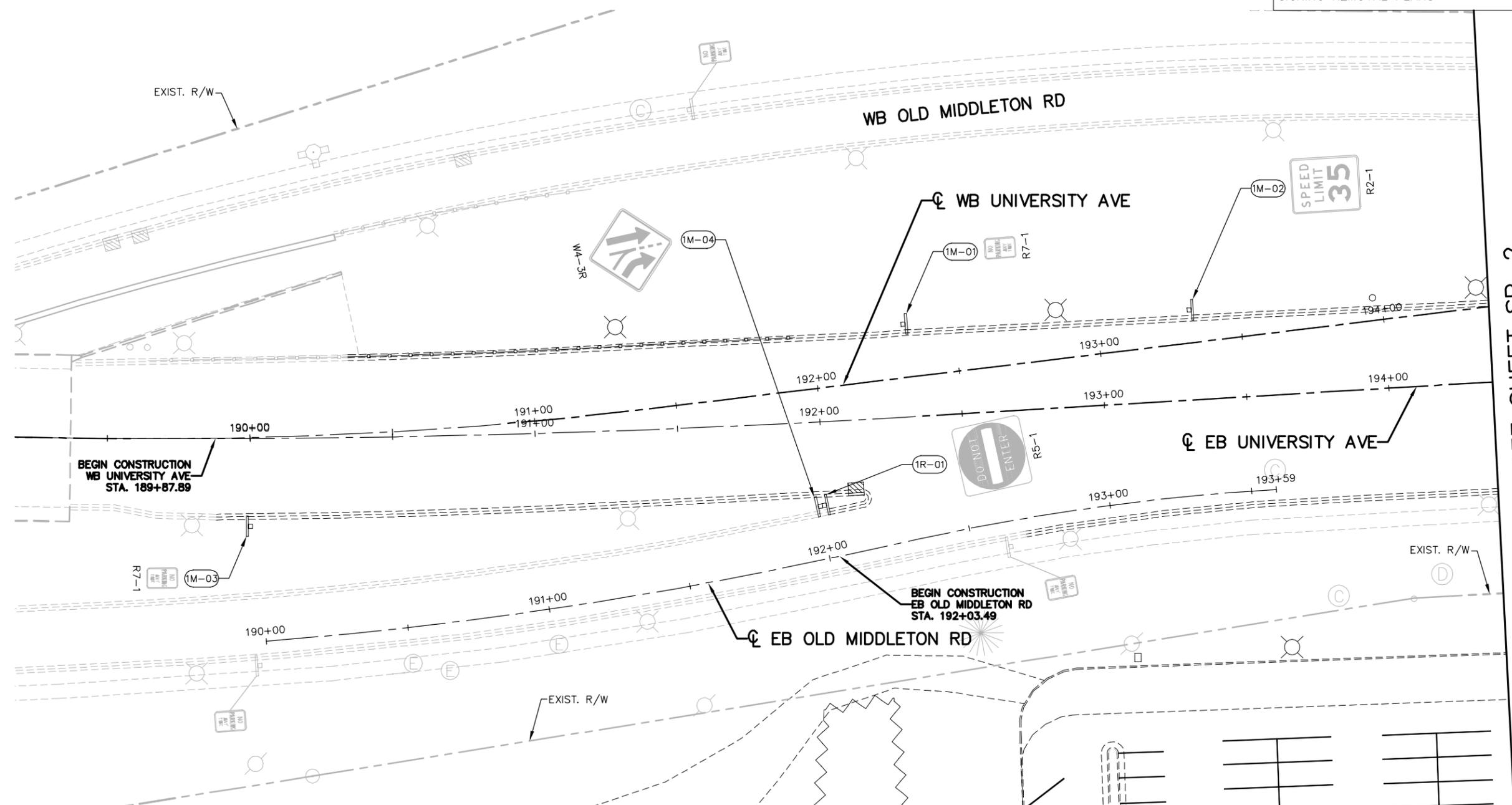
- SEE ELECTRICAL PLANS FOR MODIFICATIONS TO THE EXISTING STREET LIGHTING AND TRAFFIC SIGNAL SYSTEM.

PLOT SCALE:

PLOT NAME:

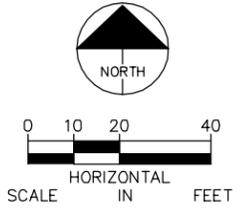
REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



SIGNING REMOVALS LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
- DENOTES SIGN NUMBER TO BE REMOVED
- DENOTES SIGN NUMBER TO BE MOVED
- ALL SIGNS NOT DESIGNATED TO BE MOVED OR REMOVED SHALL BE MAINTAINED IN PLACE

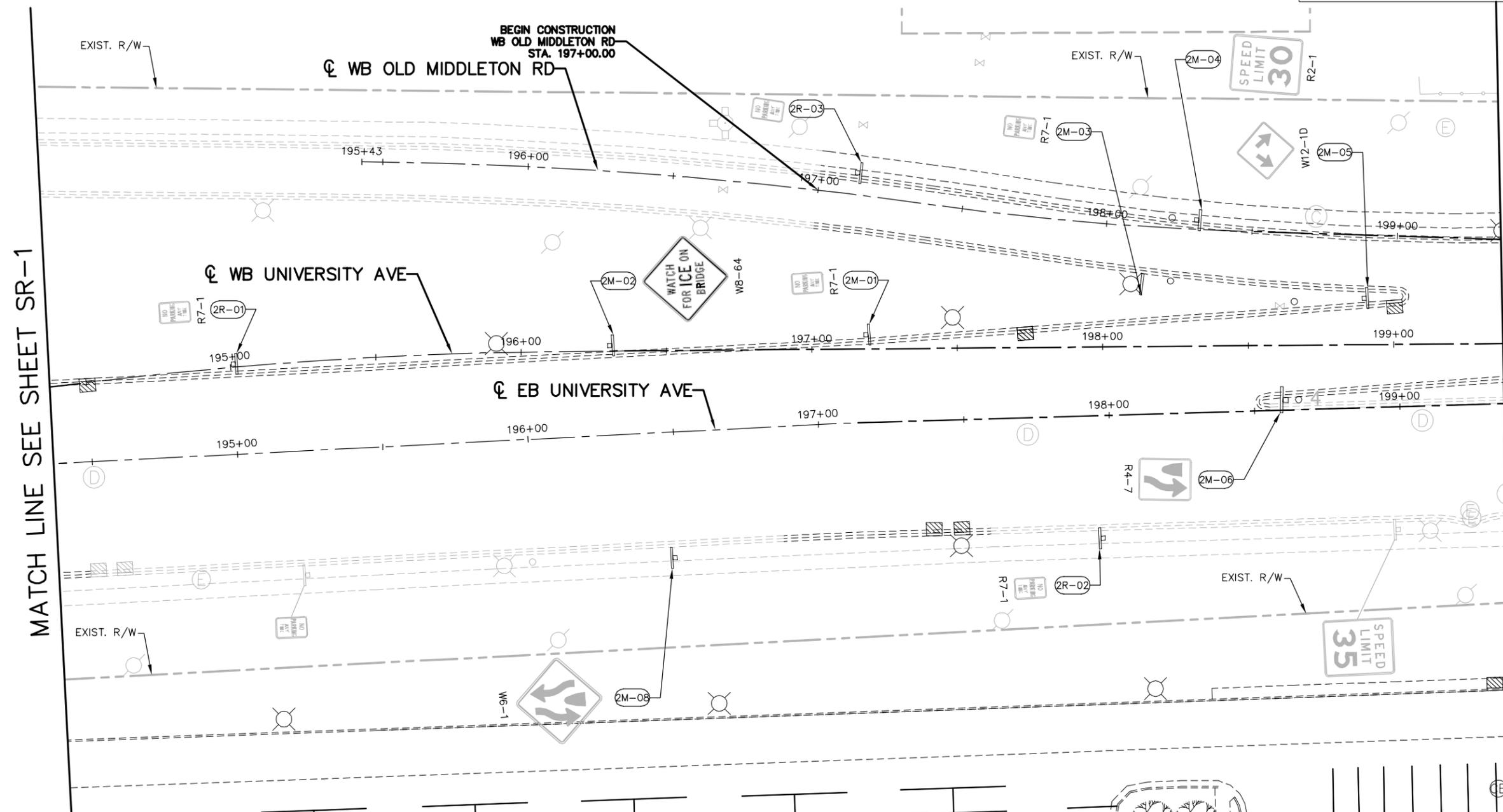


PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

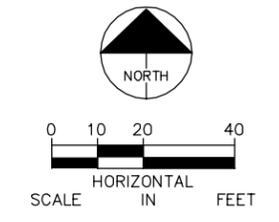


MATCH LINE SEE SHEET SR-1

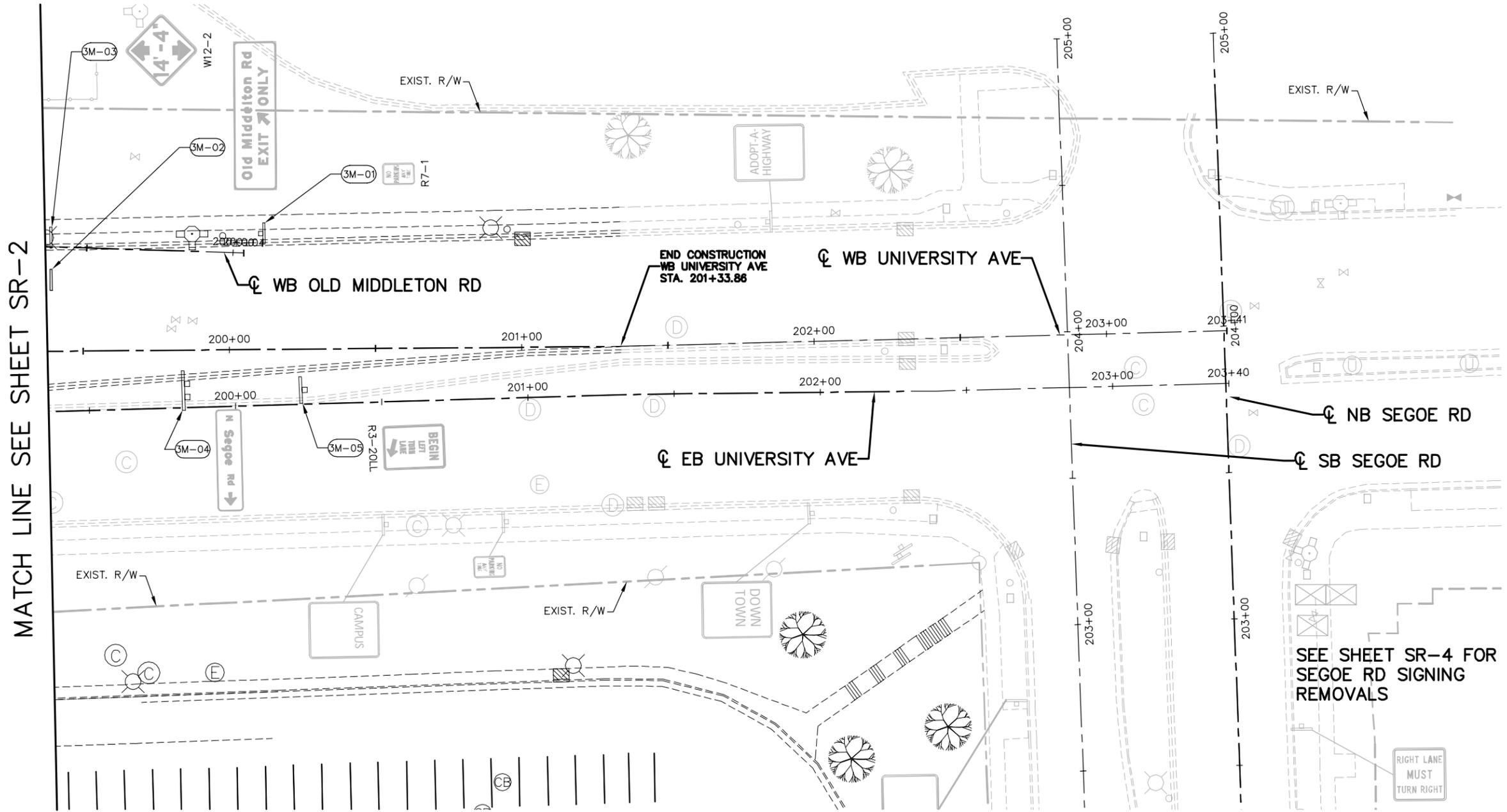
MATCH LINE SEE SHEET SR-3

SIGNING REMOVALS LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
 -  EXISTING SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
 -  (XR-XX) DENOTES SIGN NUMBER TO BE REMOVED
 -  (XM-XX) DENOTES SIGN NUMBER TO BE MOVED
- ALL SIGNS NOT DESIGNATED TO BE MOVED OR REMOVED SHALL BE MAINTAINED IN PLACE

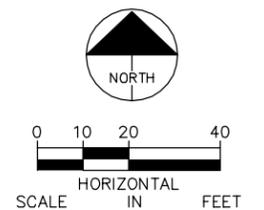


PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



SIGNING REMOVALS LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
- DENOTES SIGN NUMBER TO BE REMOVED
- DENOTES SIGN NUMBER TO BE MOVED
- ALL SIGNS NOT DESIGNATED TO BE MOVED OR REMOVED SHALL BE MAINTAINED IN PLACE

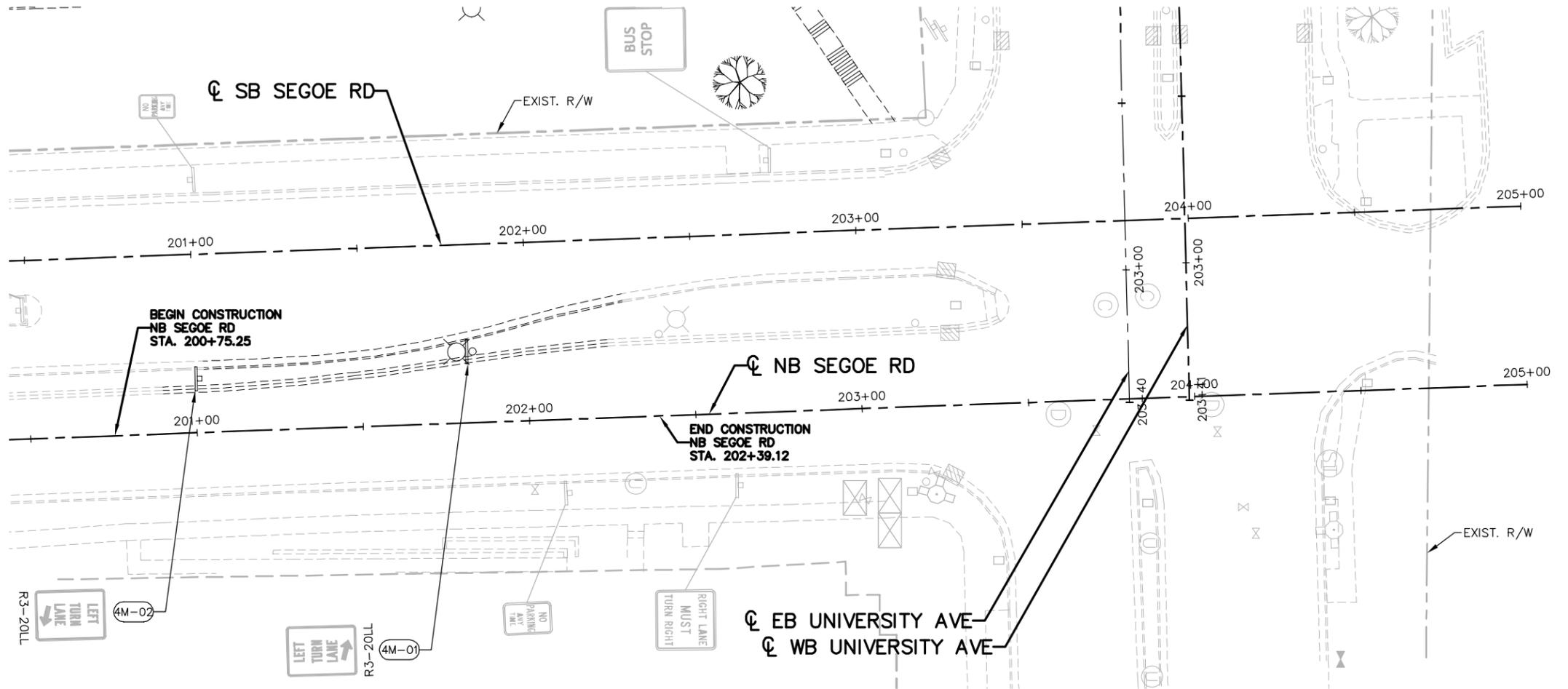


PLOT SCALE: _____

PLOT NAME: _____

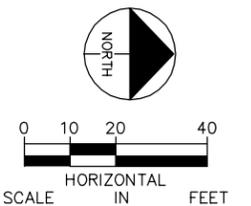
REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



SIGNING REMOVALS LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
- DENOTES SIGN NUMBER TO BE REMOVED
- DENOTES SIGN NUMBER TO BE MOVED
- ALL SIGNS NOT DESIGNATED TO BE MOVED OR REMOVED SHALL BE MAINTAINED IN PLACE

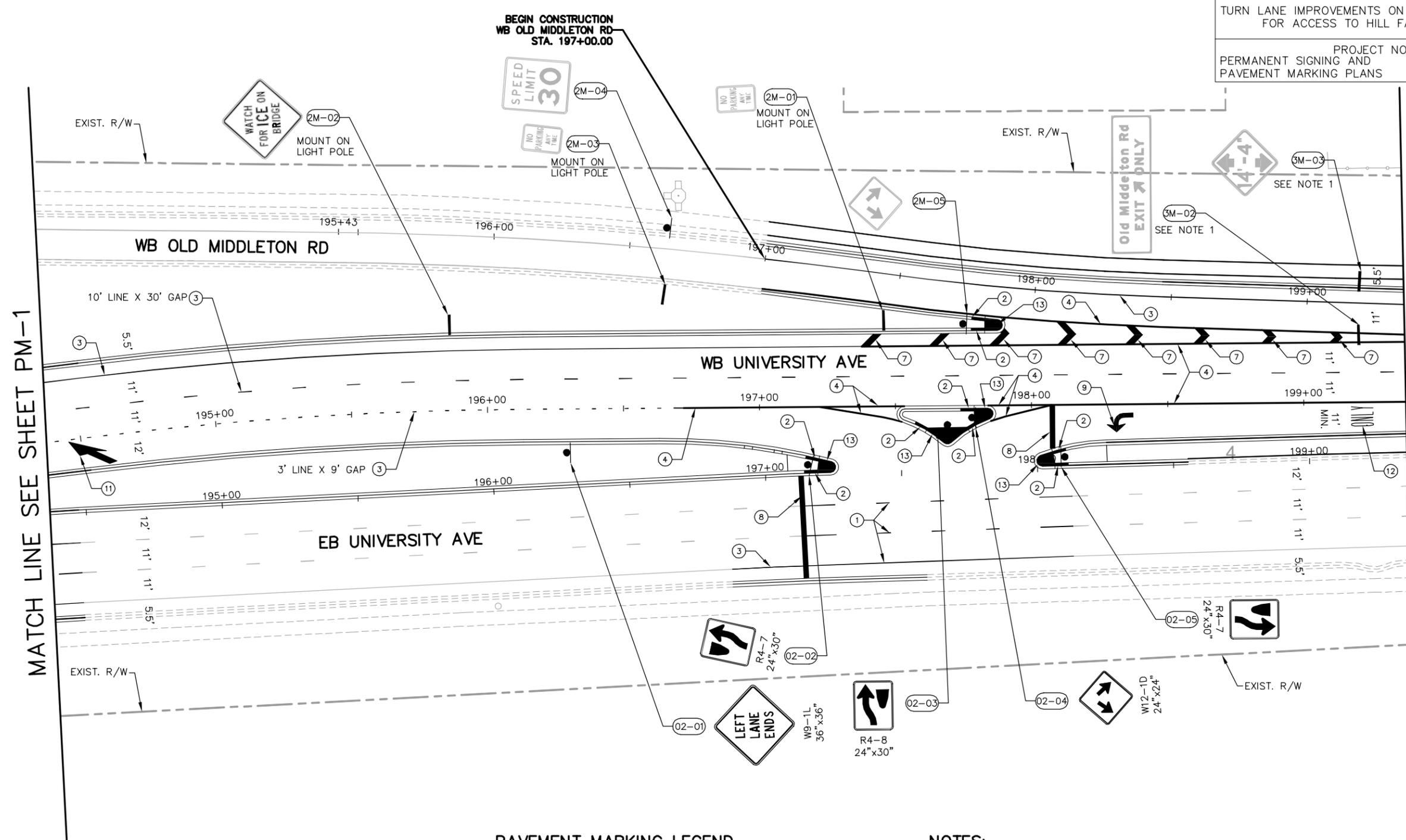


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET PM-1

MATCH LINE SEE SHEET PM-3

PERMANENT SIGNING LEGEND

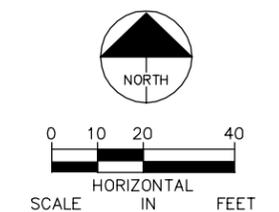
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
- DENOTES SIGN NUMBER
- DENOTES SIGN NUMBER INSTALLED FROM MOVED LOCATION
- LOCATION OF PROPOSED SIGNS SHALL BE VERIFIED BY THE CONSTRUCTION MANAGER PRIOR TO PLACEMENT
- SEE PERMANENT TRAFFIC SIGNAL PLANS FOR ADDITIONAL SIGNS PLACED ON TRAFFIC SIGNAL POLES
- DIMENSIONS ARE TO THE LANE LINE AND FACE OF CURB UNLESS OTHERWISE NOTED

PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① PAVEMENT MARKING REMOVAL, 4-INCH | ⑧ PAVEMENT MARKING EPOXY, STOP LINE, 24-INCH |
| ② PAVEMENT MARKING EPOXY, CURB (YELLOW) | ⑨ PAVEMENT MARKING EPOXY, SYMBOL, LEFT ARROW |
| ③ PAVEMENT MARKING EPOXY, LINE, 4-INCH | ⑩ PAVEMENT MARKING EPOXY, SYMBOL, RIGHT ARROW |
| ④ PAVEMENT MARKING EPOXY, LINE, 8-INCH | ⑪ PAVEMENT MARKING EPOXY, SYMBOL, MERGE |
| ⑤ PAVEMENT MARKING EPOXY, DOUBLE LINE, 4-INCH (YELLOW) | ⑫ PAVEMENT MARKING EPOXY, WORD, ONLY |
| ⑥ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 12-INCH (YELLOW) | ⑬ PAVEMENT MARKING EPOXY, MEDIAN NOSE (YELLOW) |
| ⑦ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 24-INCH | |

NOTES:

1. SIGN PANELS TO BE MOVED SHALL BE INSTALLED ON RELOCATED STREET LIGHT POLE AND TROMBONE ARM ASSEMBLY. MOUNTING SHALL MATCH EXISTING CONDITION. SEE SHEET E-5. FOR STREET LIGHT POLE ASSEMBLY.



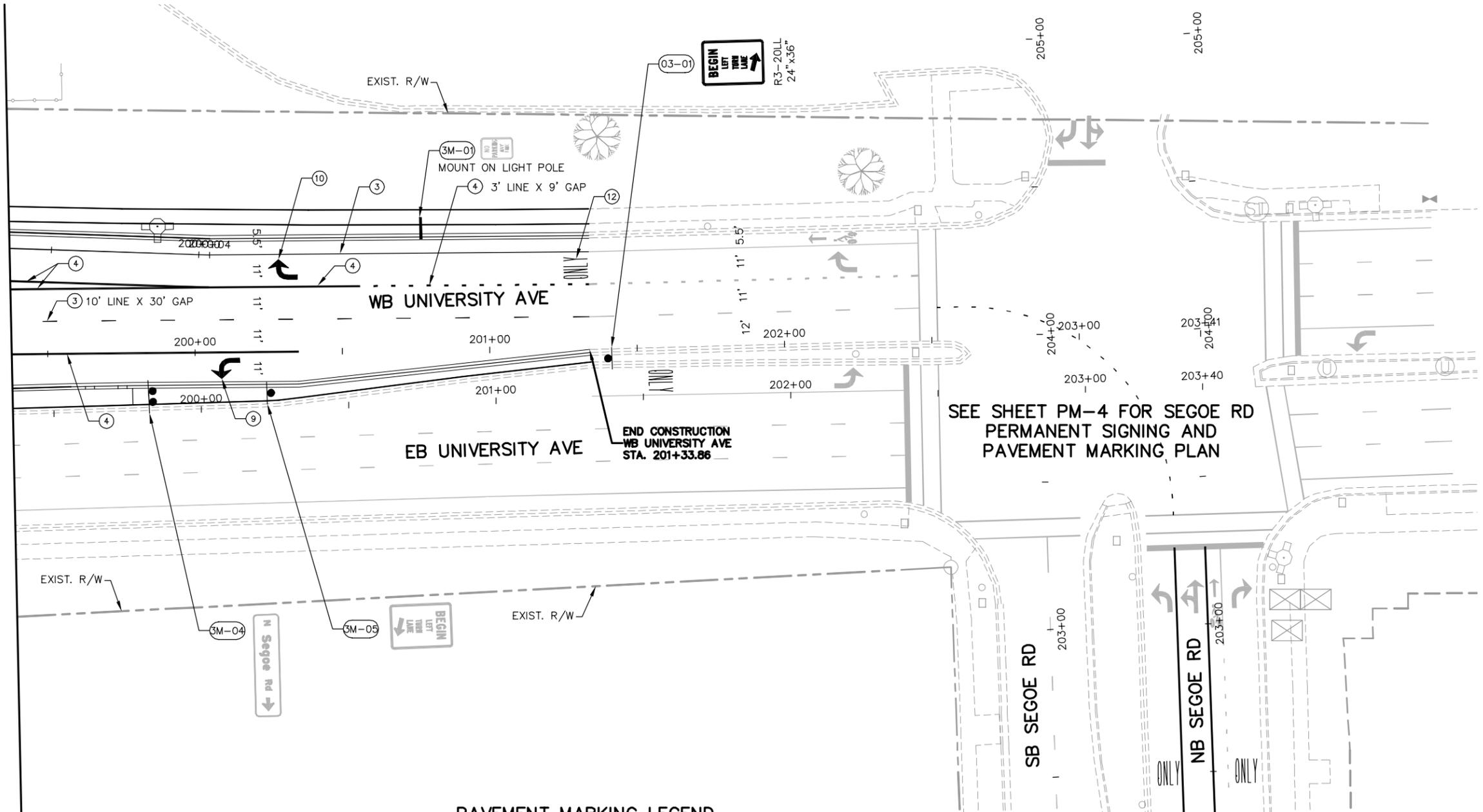
PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

MATCH LINE SEE SHEET PM-2



SEE SHEET PM-4 FOR SEGOE RD
PERMANENT SIGNING AND
PAVEMENT MARKING PLAN

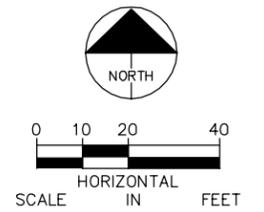
END CONSTRUCTION
WB UNIVERSITY AVE
STA. 201+33.86

PERMANENT SIGNING LEGEND

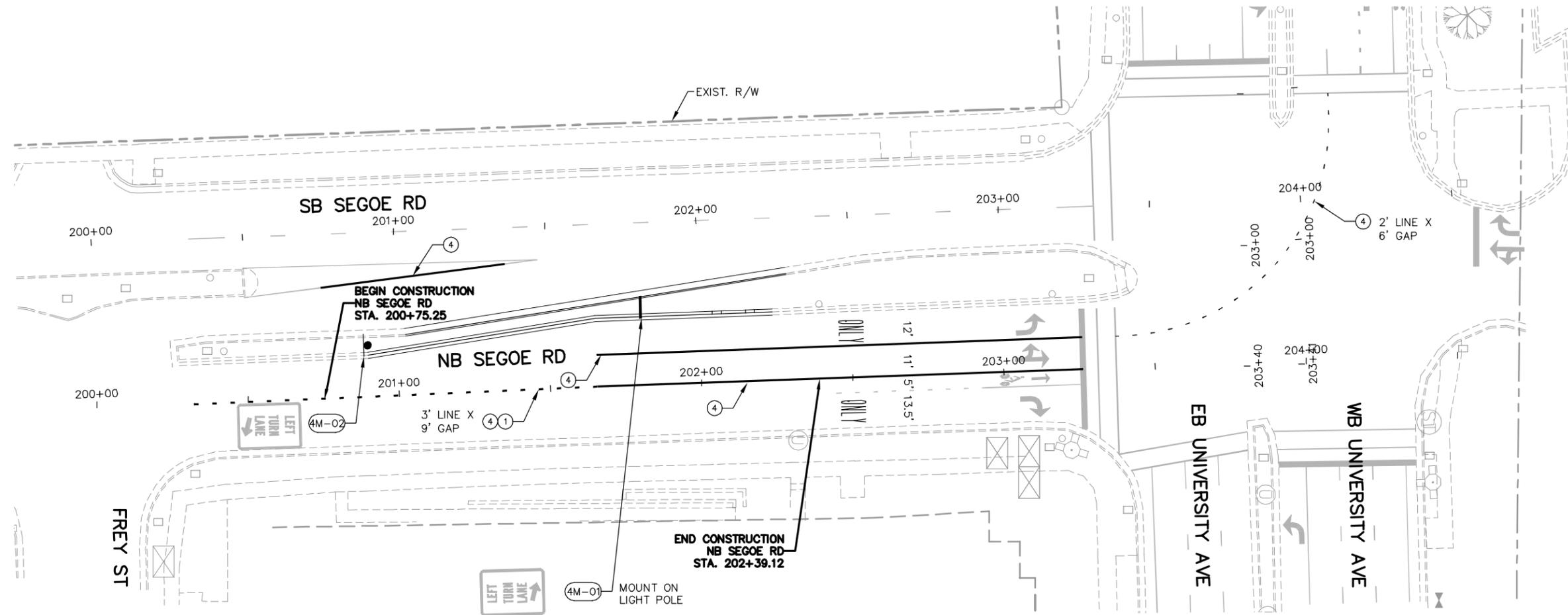
- PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
 - (XX-XX) DENOTES SIGN NUMBER
 - (X-M-XX) DENOTES SIGN NUMBER INSTALLED FROM MOVED LOCATION
- LOCATION OF PROPOSED SIGNS SHALL BE VERIFIED BY THE CONSTRUCTION MANAGER PRIOR TO PLACEMENT
- SEE PERMANENT TRAFFIC SIGNAL PLANS FOR ADDITIONAL SIGNS PLACED ON TRAFFIC SIGNAL POLES
- DIMENSIONS ARE TO THE LANE LINE AND FACE OF CURB UNLESS OTHERWISE NOTED

PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① PAVEMENT MARKING REMOVAL, 4-INCH | ⑧ PAVEMENT MARKING EPOXY, STOP LINE, 24-INCH |
| ② PAVEMENT MARKING EPOXY, CURB (YELLOW) | ⑨ PAVEMENT MARKING EPOXY, SYMBOL, LEFT ARROW |
| ③ PAVEMENT MARKING EPOXY, LINE, 4-INCH | ⑩ PAVEMENT MARKING EPOXY, SYMBOL, RIGHT ARROW |
| ④ PAVEMENT MARKING EPOXY, LINE, 8-INCH | ⑪ PAVEMENT MARKING EPOXY, SYMBOL, MERGE |
| ⑤ PAVEMENT MARKING EPOXY, DOUBLE LINE, 4-INCH (YELLOW) | ⑫ PAVEMENT MARKING EPOXY, WORD, ONLY |
| ⑥ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 12-INCH (YELLOW) | ⑬ PAVEMENT MARKING EPOXY, MEDIAN NOSE (YELLOW) |
| ⑦ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 24-INCH | |



PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____
ORIGINATOR : KIMLEY HORN AND ASSOCIATES

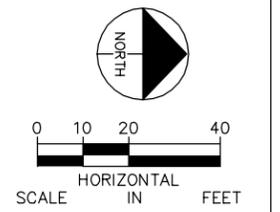


PERMANENT SIGNING LEGEND

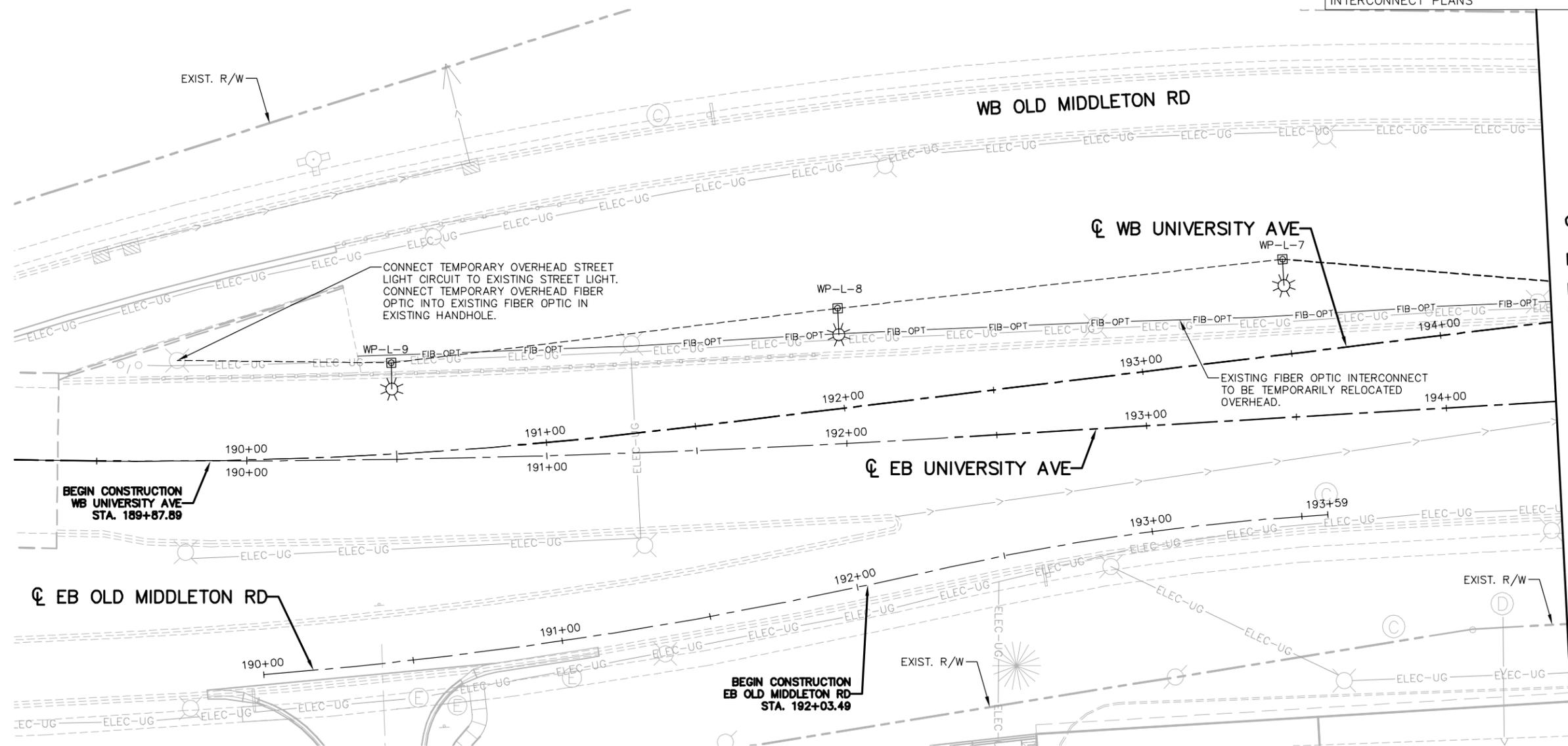
- PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON STREET LIGHT/UTILITY POLE
 - DENOTES SIGN NUMBER
 - DENOTES SIGN NUMBER INSTALLED FROM MOVED LOCATION
- LOCATION OF PROPOSED SIGNS SHALL BE VERIFIED BY THE CONSTRUCTION MANAGER PRIOR TO PLACEMENT
- SEE PERMANENT TRAFFIC SIGNAL PLANS FOR ADDITIONAL SIGNS PLACED ON TRAFFIC SIGNAL POLES
- DIMENSIONS ARE TO THE LANE LINE AND FACE OF CURB UNLESS OTHERWISE NOTED

PAVEMENT MARKING LEGEND

- | | |
|---|--|
| ① PAVEMENT MARKING REMOVAL, 4-INCH | ⑧ PAVEMENT MARKING EPOXY, STOP LINE, 24-INCH |
| ② PAVEMENT MARKING EPOXY, CURB (YELLOW) | ⑨ PAVEMENT MARKING EPOXY, SYMBOL, LEFT ARROW |
| ③ PAVEMENT MARKING EPOXY, LINE, 4-INCH | ⑩ PAVEMENT MARKING EPOXY, SYMBOL, RIGHT ARROW |
| ④ PAVEMENT MARKING EPOXY, LINE, 8-INCH | ⑪ PAVEMENT MARKING EPOXY, SYMBOL, MERGE |
| ⑤ PAVEMENT MARKING EPOXY, DOUBLE LINE, 4-INCH (YELLOW) | ⑫ PAVEMENT MARKING EPOXY, WORD, ONLY |
| ⑥ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 12-INCH (YELLOW) | ⑬ PAVEMENT MARKING EPOXY, MEDIAN NOSE (YELLOW) |
| ⑦ PAVEMENT MARKING EPOXY, DIAGONAL LINE, 24-INCH | |



PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



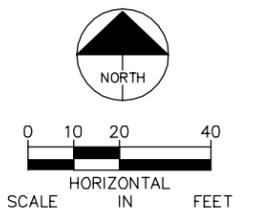
MATCH LINE SEE SHEET E-2

LEGEND

- TEMPORARY WOOD POLE WITH LUMINAIRE
- TEMPORARY WOOD POLE
- TEMPORARY OVERHEAD STREET LIGHT CONDUCTORS
- TEMPORARY OVERHEAD FIBER OPTIC CABLE
- POLE NUMBER
- (L) WITH LUMINAIRE OR (N) NO LUMINAIRE
- WOOD POLE

GENERAL NOTES:

- TEMPORARY LUMINAIRES SHALL BE AIMED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
- TEMPORARY WOOD POLES WITH LUMINAIRES SHALL BE PLACED AT AN APPROXIMATE SPACING OF 150'.
- THE CONTRACTOR SHALL NOT REMOVE THE EXISTING CITY OF MADISON FIBER OPTIC CONDUITS, HANDHOLES, OR THE EXISTING STREET LIGHTS UNTIL AFTER THE CONTRACTOR HAS INSTALLED TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE. TEMPORARY STREET LIGHTING (CONSISTING OF WOOD POLES AND OVERHEAD WIRING) MUST BE INSTALLED AND OPERATIONAL TO KEEP THE PROJECT AREA LIT AND TO MAINTAIN POWER TO THE ENTIRE LIGHTING CIRCUIT PRIOR TO REMOVAL OF EXISTING STREET LIGHTING.
- THE CONTRACTOR SHALL CONTACT THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT TO SPICE TOGETHER THE FIBER OPTIC COMMUNICATION CABLE PRIOR TO PERMITTING THE EXISTING FIBER CONDUIT SYSTEM TO BE REMOVED.
- CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING TEMPORARY WOOD POLES IF TREE TRIMMING IS NECESSARY.
- CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO INSTALLING TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE.
- THE PROPOSED STREET LIGHTING MODIFICATIONS SHALL BE MADE TO EXISTING CITY OF MADISON STREET LIGHTING CIRCUIT 1414 (120/240V). THE SERVICE CABINET IS LOCATED AT THE INTERSECTION OF UNIVERSITY AVE AND SEGOE RD.

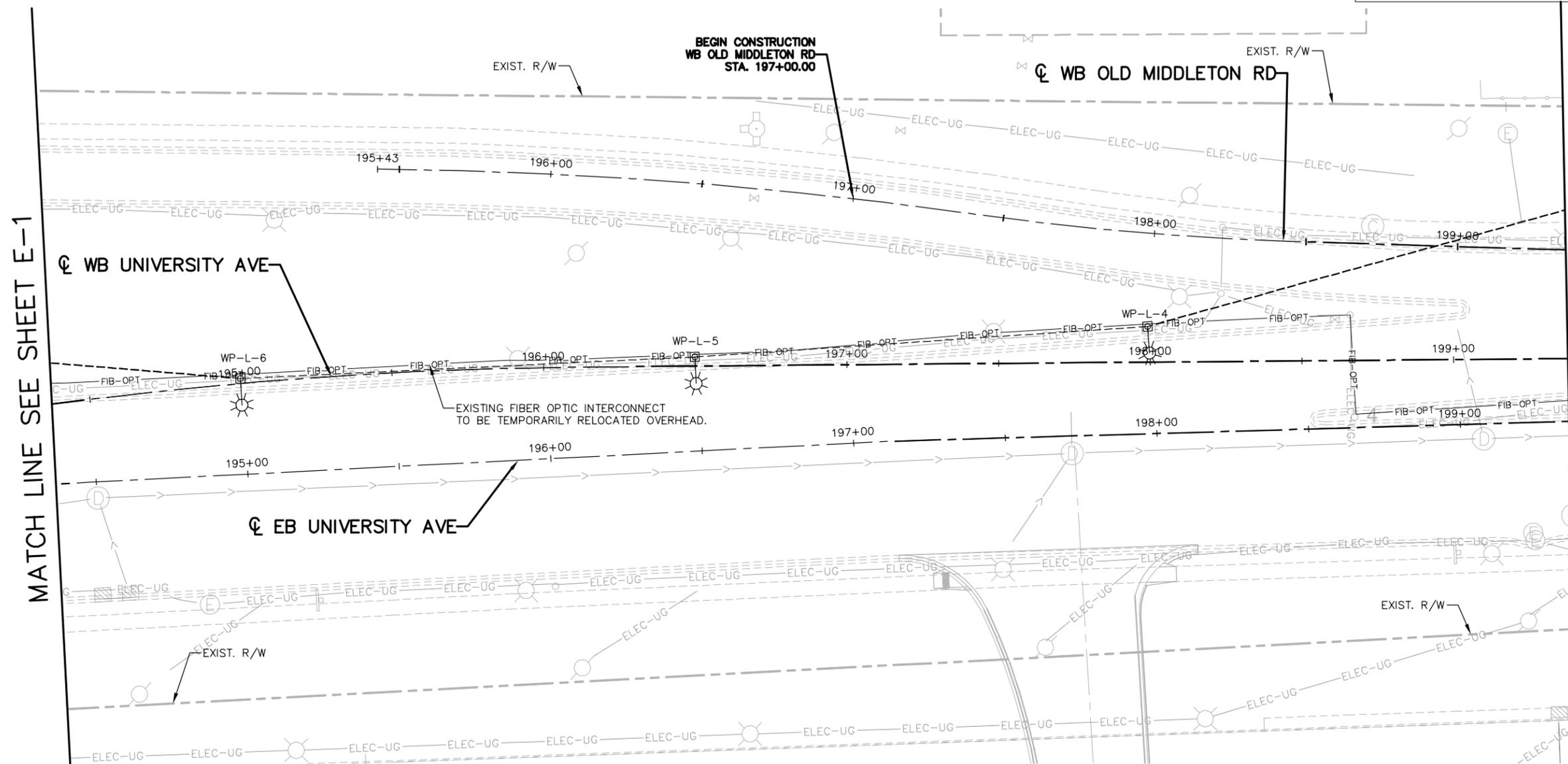


PLOT SCALE:

PLOT NAME:

REV. DATE:

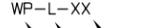
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET E-1

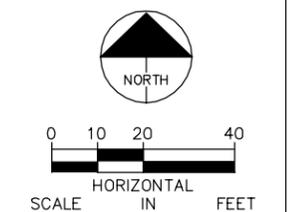
MATCH LINE SEE SHEET E-3

LEGEND

-  TEMPORARY WOOD POLE WITH LUMINAIRE
-  TEMPORARY WOOD POLE
-  TEMPORARY OVERHEAD STREET LIGHT CONDUCTORS
-  TEMPORARY OVERHEAD FIBER OPTIC CABLE
-  WP-L-XX
-  (L) WITH LUMINAIRE OR (N) NO LUMINAIRE
-  WOOD POLE

GENERAL NOTES:

1. TEMPORARY LUMINAIRES SHALL BE AIMED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
2. TEMPORARY WOOD POLES WITH LUMINAIRES SHALL BE PLACED AT AN APPROXIMATE SPACING OF 150'.
3. THE CONTRACTOR SHALL NOT REMOVE THE EXISTING CITY OF MADISON FIBER OPTIC CONDUITS, HANDHOLES, OR THE EXISTING STREET LIGHTS UNTIL AFTER THE CONTRACTOR HAS INSTALLED TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE. TEMPORARY STREET LIGHTING (CONSISTING OF WOOD POLES AND OVERHEAD WIRING) MUST BE INSTALLED AND OPERATIONAL TO KEEP THE PROJECT AREA LIT AND TO MAINTAIN POWER TO THE ENTIRE LIGHTING CIRCUIT PRIOR TO REMOVAL OF EXISTING STREET LIGHTING.
4. THE CONTRACTOR SHALL CONTACT THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT TO SPICE TOGETHER THE FIBER OPTIC COMMUNICATION CABLE PRIOR TO PERMITTING THE EXISTING FIBER CONDUIT SYSTEM TO BE REMOVED.
5. CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING TEMPORARY WOOD POLES IF TREE TRIMMING IS NECESSARY.
6. CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO INSTALLING TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE.
7. THE PROPOSED STREET LIGHTING MODIFICATIONS SHALL BE MADE TO EXISTING CITY OF MADISON STREET LIGHTING CIRCUIT 1414 (120/240V). THE SERVICE CABINET IS LOCATED AT THE INTERSECTION OF UNIVERSITY AVE AND SEGOE RD.

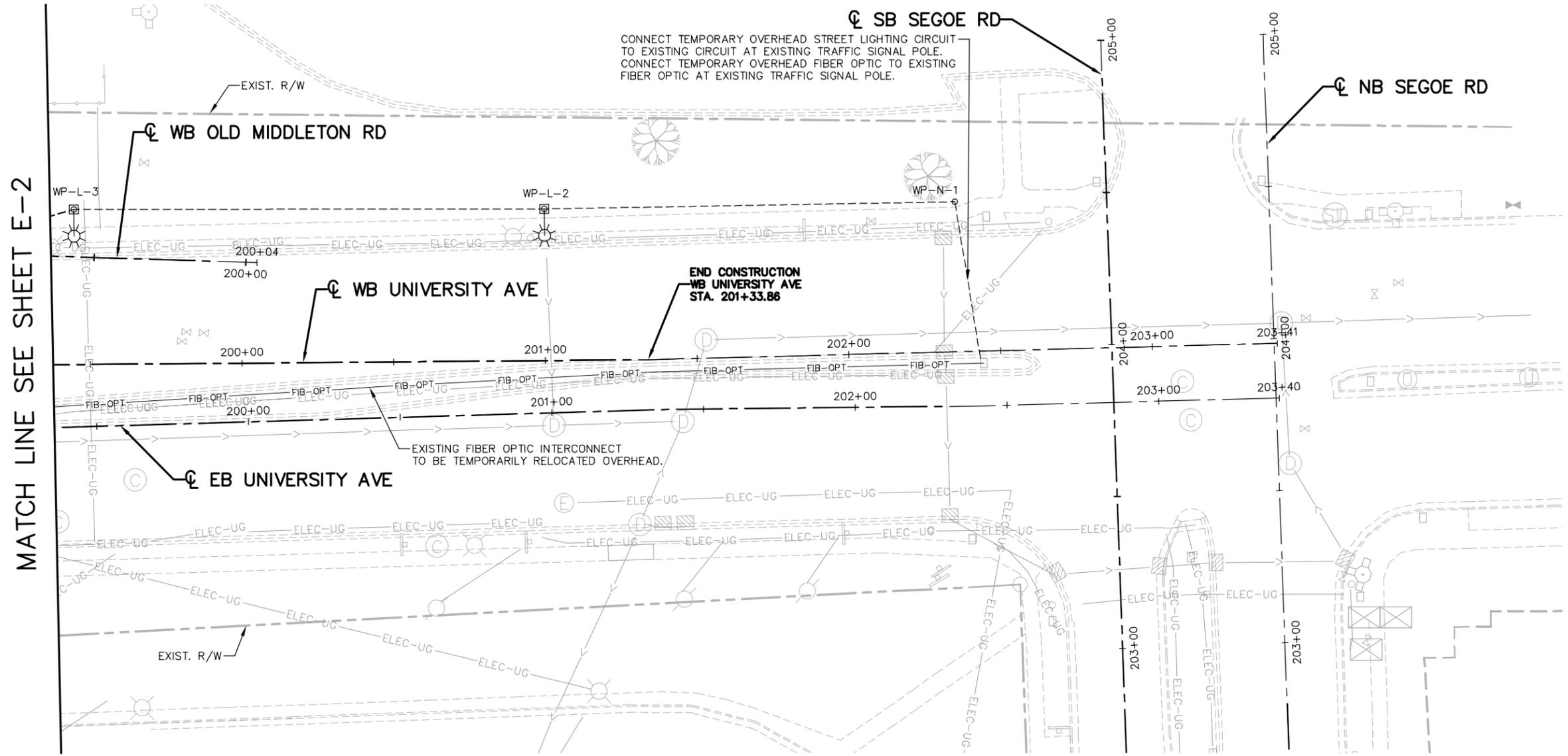


PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



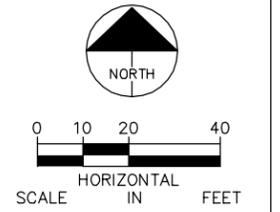
MATCH LINE SEE SHEET E-2

LEGEND

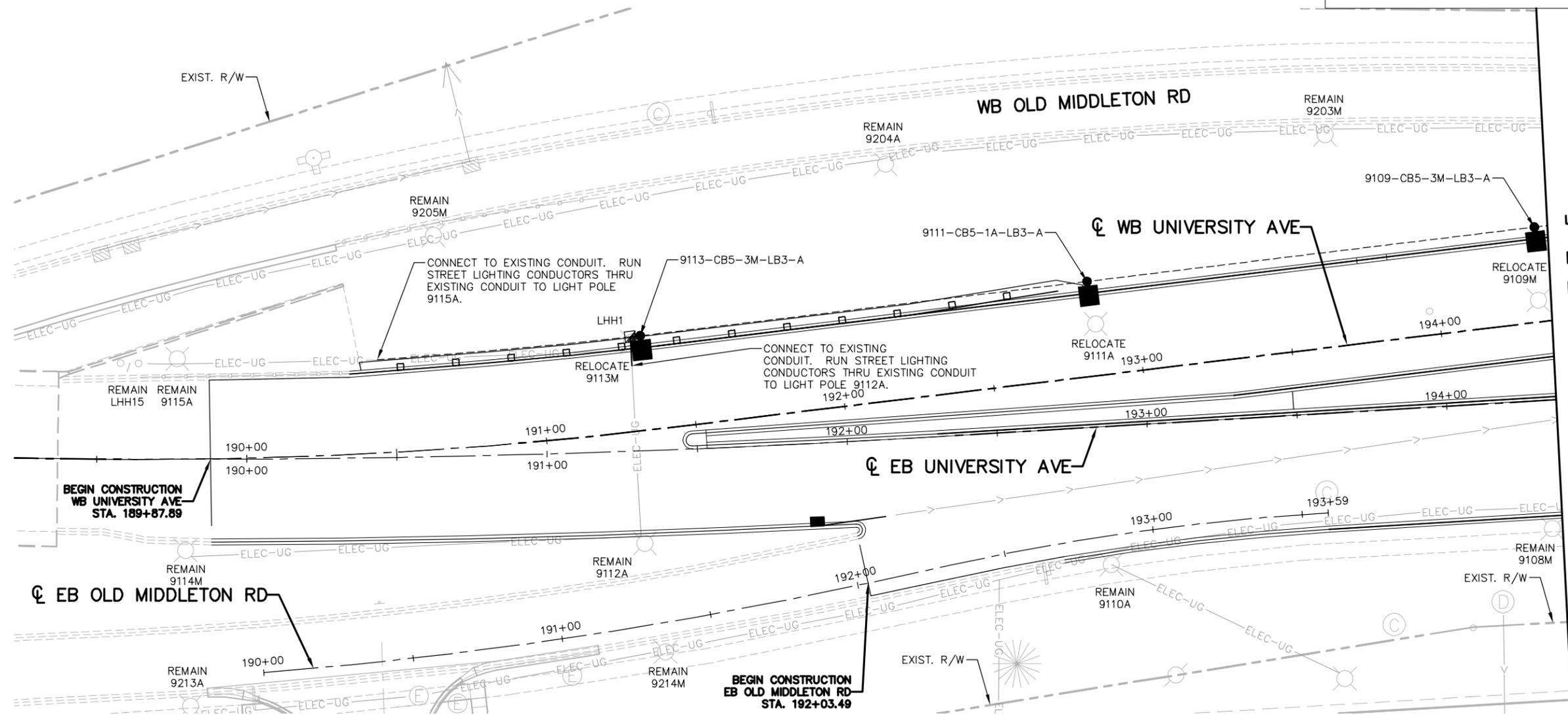
-  TEMPORARY WOOD POLE WITH LUMINAIRE
-  TEMPORARY WOOD POLE
-  TEMPORARY OVERHEAD STREET LIGHT CONDUCTORS
-  TEMPORARY OVERHEAD FIBER OPTIC CABLE
-  WP-L-XX
-  POLE NUMBER
(L) WITH LUMINAIRE OR (N) NO LUMINAIRE
-  WOOD POLE

GENERAL NOTES:

1. TEMPORARY LUMINAIRES SHALL BE AIMED PERPENDICULAR TO THE DIRECTION OF TRAVEL.
2. TEMPORARY WOOD POLES WITH LUMINAIRES SHALL BE PLACED AT AN APPROXIMATE SPACING OF 150'.
3. THE CONTRACTOR SHALL NOT REMOVE THE EXISTING CITY OF MADISON FIBER OPTIC CONDUITS, HANDHOLES, OR THE EXISTING STREET LIGHTS UNTIL AFTER THE CONTRACTOR HAS INSTALLED TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE. TEMPORARY STREET LIGHTING (CONSISTING OF WOOD POLES AND OVERHEAD WIRING) MUST BE INSTALLED AND OPERATIONAL TO KEEP THE PROJECT AREA LIT AND TO MAINTAIN POWER TO THE ENTIRE LIGHTING CIRCUIT PRIOR TO REMOVAL OF EXISTING STREET LIGHTING.
4. THE CONTRACTOR SHALL CONTACT THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT TO SPICE TOGETHER THE FIBER OPTIC COMMUNICATION CABLE PRIOR TO PERMITTING THE EXISTING FIBER CONDUIT SYSTEM TO BE REMOVED.
5. CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING TEMPORARY WOOD POLES IF TREE TRIMMING IS NECESSARY.
6. CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO INSTALLING TEMPORARY WOOD POLES WITH LUMINAIRES, TEMPORARY OVERHEAD STREET LIGHT CIRCUITS, AND TEMPORARY OVERHEAD FIBER OPTIC CABLE.
7. THE PROPOSED STREET LIGHTING MODIFICATIONS SHALL BE MADE TO EXISTING CITY OF MADISON STREET LIGHTING CIRCUIT 1414 (120/240V). THE SERVICE CABINET IS LOCATED AT THE INTERSECTION OF UNIVERSITY AVE AND SEGOE RD.



PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____
ORIGINATOR : KIMLEY HORN AND ASSOCIATES



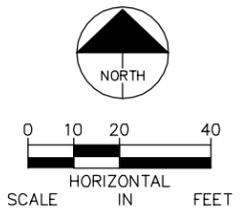
MATCH LINE SEE SHEET E-5

LEGEND

- INSTALL SALVAGED CITY STREET LIGHT UNIT (TYPE A)
 - INSTALL SALVAGED CITY STREET LIGHT UNIT, TWIN ARMS (TYPE B)
 - INSTALL SALVAGED CITY CONCRETE POLE STREET LIGHT UNIT (TYPE C)
 - FURNISH & INSTALL 2 INCH PVC (SCHEDULE 40) CONDUIT BY "OPEN TRENCH" METHOD
FURNISH & INSTALL 3/4 AND 1/8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
 - FURNISH & INSTALL 2 INCH PVC (SCHEDULE 80) CONDUIT BY "OPEN TRENCH" METHOD
FURNISH & INSTALL 3/4 AND 1/8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
 - FURNISH & INSTALL 2 INCH PVC (SCHEDULE 80) CONDUIT
FURNISH & INSTALL 3/4 AND 1/8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
 - CONSTRUCT ELECTRICAL HANDHOLE TYPE 1
- XXXX-CB5-5M-LB3-A
- LIGHT UNIT TYPE
 - CONCRETE BASE TYPE
 - CIRCUIT NUMBER; (A) ALL NIGHT OR (M) MIDNIGHT
 - SERVICE CABINET
 - LIGHTING UNIT NUMBER

GENERAL NOTES:

1. ALL PROPOSED LUMINAIRES SHALL BE LED, EXCEPT AS NOTED.
2. COORDINATE ALL MODIFICATIONS OF EXISTING LIGHTING CIRCUITS WITH THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
3. PERFORM CIRCUIT CONDUCTOR SPLICES IN HANDHOLES USING APPROVED SUBMERSIBLE MULTI-TAP TERMINAL BLOCK TYPE CONNECTORS. CONNECTORS SHALL BE CONSIDERED INCIDENTAL TO THE ELECTRICAL WIRE LIGHTING BID ITEM.
4. REMOVAL OF ALL BELOW GRADE WIRING SHALL BE INCIDENTAL TO THE REMOVE STREET LIGHT POLE AND REMOVE STREET LIGHT BASE BID ITEMS.
5. CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING STREET LIGHTS IF TREE TRIMMING IS NECESSARY.
6. CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO CONSTRUCTING CONCRETE BASES.
7. INSTALL CONDUIT BY BORING WHEN CROSSING ROADWAYS ONLY IF NECESSARY. CONDUIT CROSSING ROADWAYS MAY BE INSTALLED BY TRENCHING IF THE CONSTRUCTION MANAGER DETERMINES BORING TO BE UNNECESSARY.
8. PLACE LIGHTING CONDUITS IN THE SAME TRENCH AS TRAFFIC SIGNAL CONDUITS WHEN POSSIBLE.
9. CLEARLY LABEL UNUSED CONDUCTORS AS "SPARE" IN ALL CONDUIT RUNS CONTAINING UNUSED CONDUCTORS.
10. THE PROPOSED STREET LIGHTING MODIFICATIONS SHALL BE MADE TO EXISTING CITY OF MADISON STREET LIGHTING CIRCUIT 1414 (120/240V). THE SERVICE CABINET IS LOCATED AT THE INTERSECTION OF UNIVERSITY AVE AND SEGOE RD.
11. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

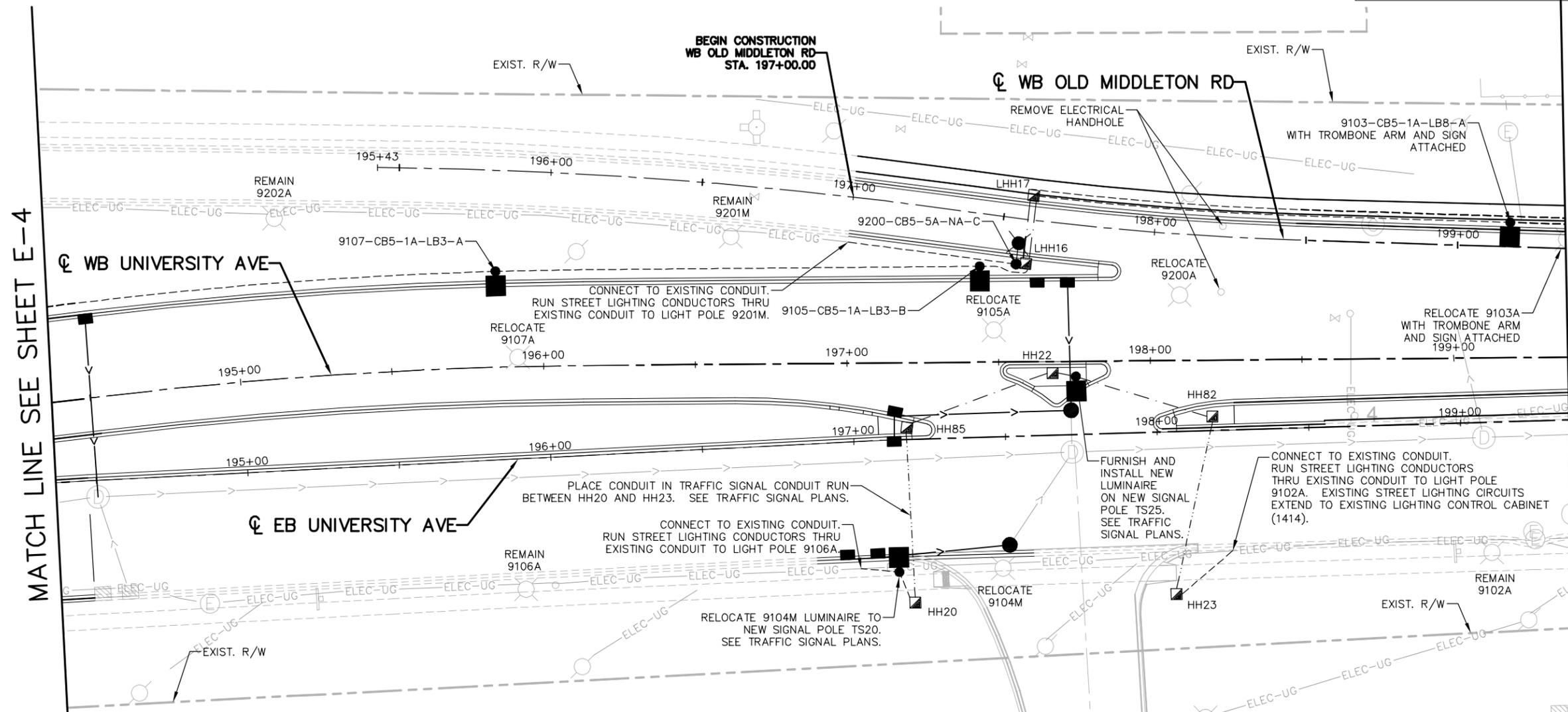


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



MATCH LINE SEE SHEET E-4

MATCH LINE SEE SHEET E-6

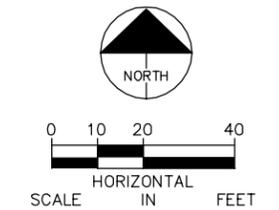
LEGEND

- INSTALL SALVAGED CITY STREET LIGHT UNIT (TYPE A)
- INSTALL SALVAGED CITY STREET LIGHT UNIT, TWIN ARMS (TYPE B)
- INSTALL SALVAGED CITY CONCRETE POLE STREET LIGHT UNIT (TYPE C)
- FURNISH & INSTALL 2 INCH PVC (SCHEDULE 40) CONDUIT BY "OPEN TRENCH" METHOD
FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
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FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
- FURNISH & INSTALL 2 INCH PVC (SCHEDULE 80) CONDUIT
FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
- CONSTRUCT ELECTRICAL HANDHOLE TYPE 1

XXXX-CB5-5M-LB3-A
 LIGHT UNIT TYPE
 CONCRETE BASE TYPE
 CIRCUIT NUMBER; (A) ALL NIGHT OR (M) MIDNIGHT
 SERVICE CABINET
 LIGHTING UNIT NUMBER

GENERAL NOTES:

1. ALL PROPOSED LUMINAIRES SHALL BE LED, EXCEPT AS NOTED.
2. COORDINATE ALL MODIFICATIONS OF EXISTING LIGHTING CIRCUITS WITH THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
3. PERFORM CIRCUIT CONDUCTOR SPLICES IN HANDHOLES USING APPROVED SUBMERSIBLE MULTI-TAP TERMINAL BLOCK TYPE CONNECTORS. CONNECTORS SHALL BE CONSIDERED INCIDENTAL TO THE ELECTRICAL WIRE LIGHTING BID ITEM.
4. REMOVAL OF ALL BELOW GRADE WIRING SHALL BE INCIDENTAL TO THE REMOVE STREET LIGHT POLE AND REMOVE STREET LIGHT BASE BID ITEMS.
5. CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING STREET LIGHTS IF TREE TRIMMING IS NECESSARY.
6. CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO CONSTRUCTING CONCRETE BASES.
7. INSTALL CONDUIT BY BORING WHEN CROSSING ROADWAYS ONLY IF NECESSARY. CONDUIT CROSSING ROADWAYS MAY BE INSTALLED BY TRENCHING IF THE CONSTRUCTION MANAGER DETERMINES BORING TO BE UNNECESSARY.
8. PLACE LIGHTING CONDUITS IN THE SAME TRENCH AS TRAFFIC SIGNAL CONDUITS WHEN POSSIBLE.
9. CLEARLY LABEL UNUSED CONDUCTORS AS "SPARE" IN ALL CONDUIT RUNS CONTAINING UNUSED CONDUCTORS.
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11. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

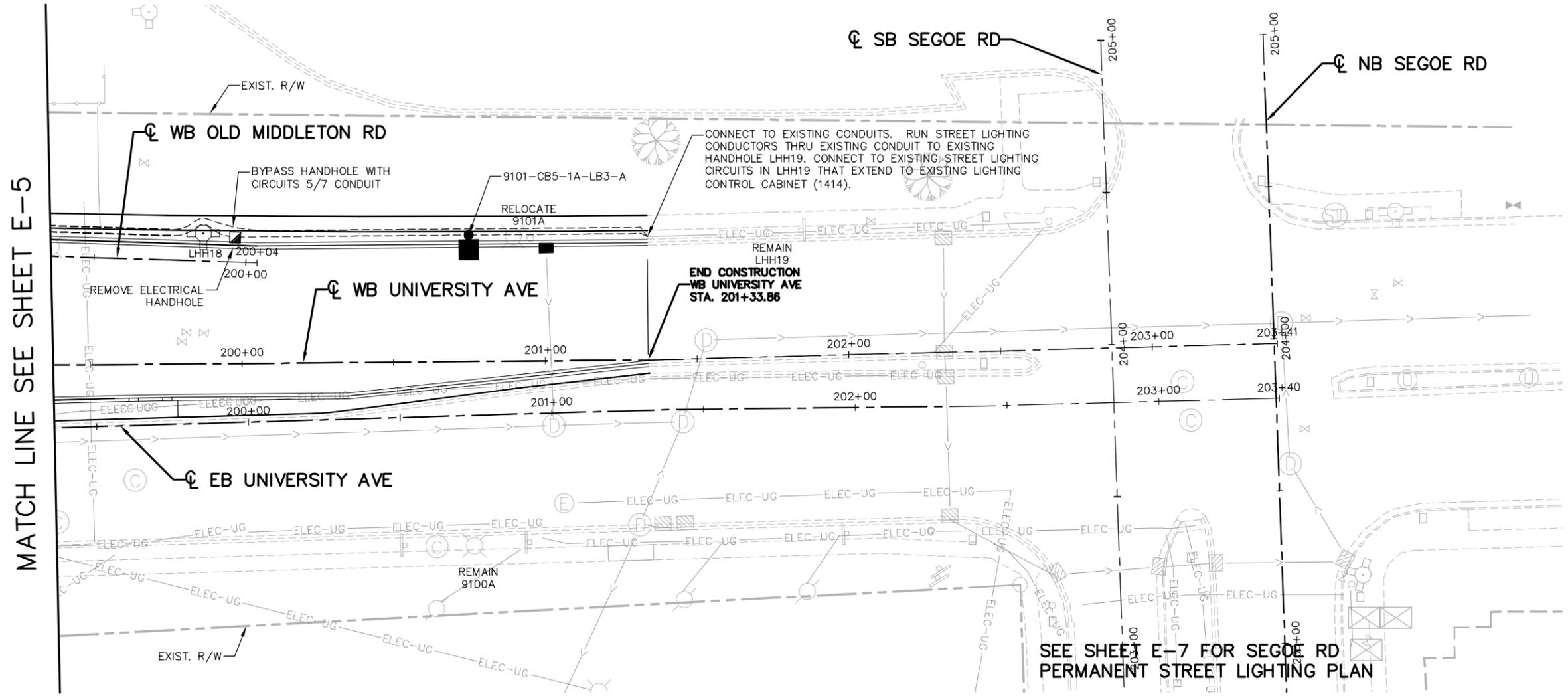


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



LEGEND

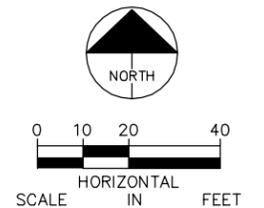
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FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
- FURNISH & INSTALL 2 INCH PVC (SCHEDULE 80) CONDUIT
FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
- CONSTRUCT ELECTRICAL HANDHOLE TYPE 1

XXXX-CB5-5M-LB3-A

LIGHT UNIT TYPE
 CONCRETE BASE TYPE
 CIRCUIT NUMBER; (A) ALL NIGHT OR (M) MIDNIGHT
 SERVICE CABINET
 LIGHTING UNIT NUMBER

GENERAL NOTES:

1. ALL PROPOSED LUMINAIRES SHALL BE LED, EXCEPT AS NOTED.
2. COORDINATE ALL MODIFICATIONS OF EXISTING LIGHTING CIRCUITS WITH THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
3. PERFORM CIRCUIT CONDUCTOR SPLICES IN HANDHOLES USING APPROVED SUBMERSIBLE MULTI-TAP TERMINAL BLOCK TYPE CONNECTORS. CONNECTORS SHALL BE CONSIDERED INCIDENTAL TO THE ELECTRICAL WIRE LIGHTING BID ITEM.
4. REMOVAL OF ALL BELOW GRADE WIRING SHALL BE INCIDENTAL TO THE REMOVE STREET LIGHT POLE AND REMOVE STREET LIGHT BASE BID ITEMS.
5. CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING STREET LIGHTS IF TREE TRIMMING IS NECESSARY.
6. CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO CONSTRUCTING CONCRETE BASES.
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11. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

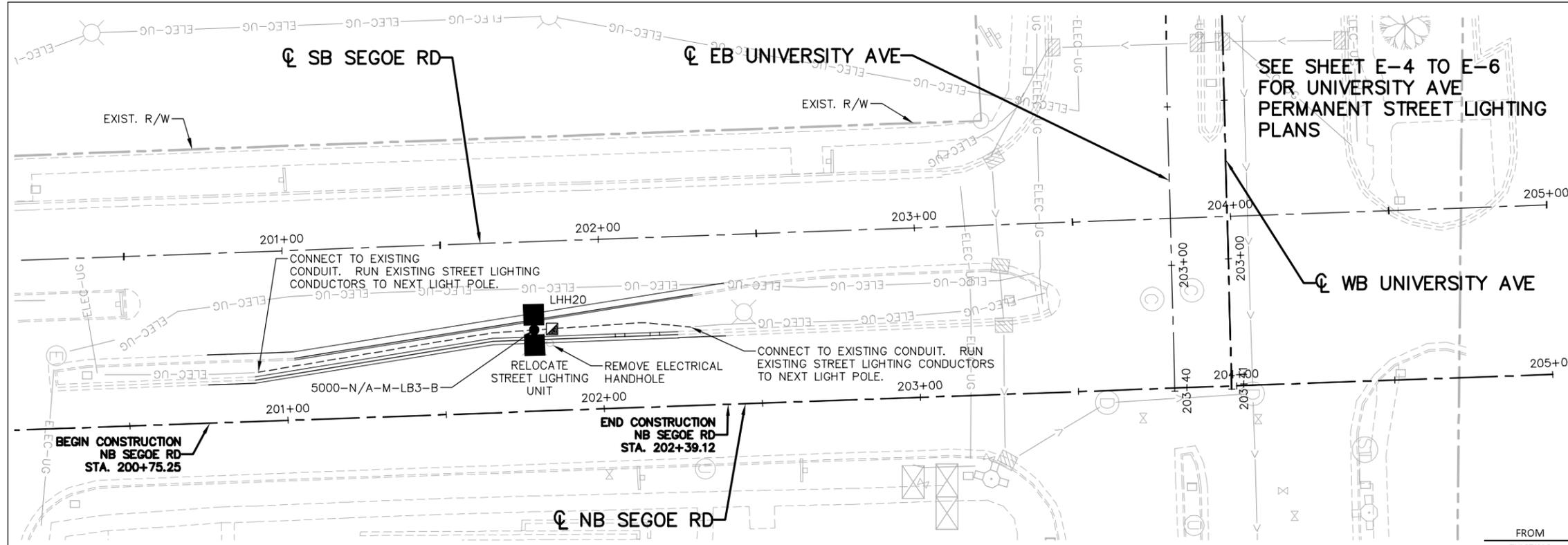


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



SEE SHEET E-4 TO E-6
FOR UNIVERSITY AVE
PERMANENT STREET LIGHTING
PLANS

CONDUIT AND CONDUCTORS (STREET LIGHTING)					
FROM	TO	60229	60230	60231	60253
		TRENCHED SCHEDULE 80 2" (LF)	SCHEDULE 80 2" (LF)	TRENCHED SCHEDULE 40 2" (LF)	FURNISH & INSTALL 3 #4 & 1 #8 WIRES IN CONDUIT (LF)
EXISTING	LHH1	-	-	90	165
EXISTING	LHH1	20	-	-	85
LHH1	9113M	-	-	20	35
9113M	9111A	-	-	170	190
9111A	9109M	-	-	170	190
9109M	9107A	-	-	175	195
9107A	9105A	-	-	180	200
9105A	LHH16	-	-	35	50
LHH16	LHH17	60	-	-	70
LHH17	LHH19	-	-	390	400
LHH17	9103A	-	-	170	185
EXISTING	9200A	-	-	65	115
9200A	LHH16	-	-	20	35
EXISTING	TS20	-	-	25	145
TS20	HH20	-	-	25	40
HH20	HH85	-	70	-	80
HH85	HH22	60	-	-	70
HH22	TS25	-	-	20	35
TS25	HH82	60	-	-	75
HH82	HH23	-	80	-	90
HH23	EXISTING	-	-	30	120
9103A	LHH18	-	-	95	105
LHH18	9101A	-	-	90	100
9101A	LHH19	-	-	70	125
EXISTING	5000M	-	-	110	180
5000M	LHH20	-	-	20	40
LHH20	EXISTING	-	-	50	80
TOTALS		200	150	2020	3200

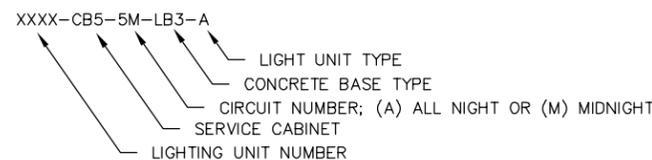
STREET LIGHT POLES & BASES

STRUCTURE	STATION	OFFSET	INSTALL SALVAGED CITY UNIT		CONCRETE BASES	
			SINGLE EACH	TWIN EACH	CONCRETE EACH	TYPE LB-3 TYPE LB-8 EACH
9113M	191+35.00	31.50' LT	1	-	-	1
9111A	192+85.00	31.50' LT	1	-	-	1
9109M	194+35.00	31.50' LT	1	-	-	1
9107A	195+85.00	31.50' LT	1	-	-	1
9105A	197+44.00	31.50' LT	1	-	-	1
9200A	197+56.00	32.14' LT	-	-	1	-
9103A	199+19.00	44.45' LT	1	-	-	1
9104M	(SEE TRAFFIC SIGNAL PLANS)					
TS 25	(SEE TRAFFIC SIGNAL PLANS)					
9101A	200+75.00	41.50' LT	1	-	-	1
5000M	201+78.74	25.67' LT	-	1	-	1
TOTALS			7	1	1	7

NOTE:
ALL STATIONS AND OFFSETS ARE WITH RESPECT TO WB UNIVERSITY AVE EXCEPT STRUCTURE 5000M,
WHICH IS WITH RESPECT TO NB SEGOE RD

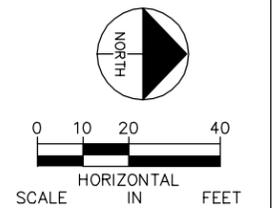
LEGEND

- INSTALL SALVAGED CITY STREET LIGHT UNIT (TYPE A)
- INSTALL SALVAGED CITY STREET LIGHT UNIT, TWIN ARMS (TYPE B)
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- FURNISH & INSTALL 2 INCH PVC (SCHEDULE 80) CONDUIT
FURNISH & INSTALL 3#4 AND 1#8 IN EXISTING OR CONTRACTOR-INSTALLED CONDUIT
- CONSTRUCT ELECTRICAL HANDHOLE TYPE 1



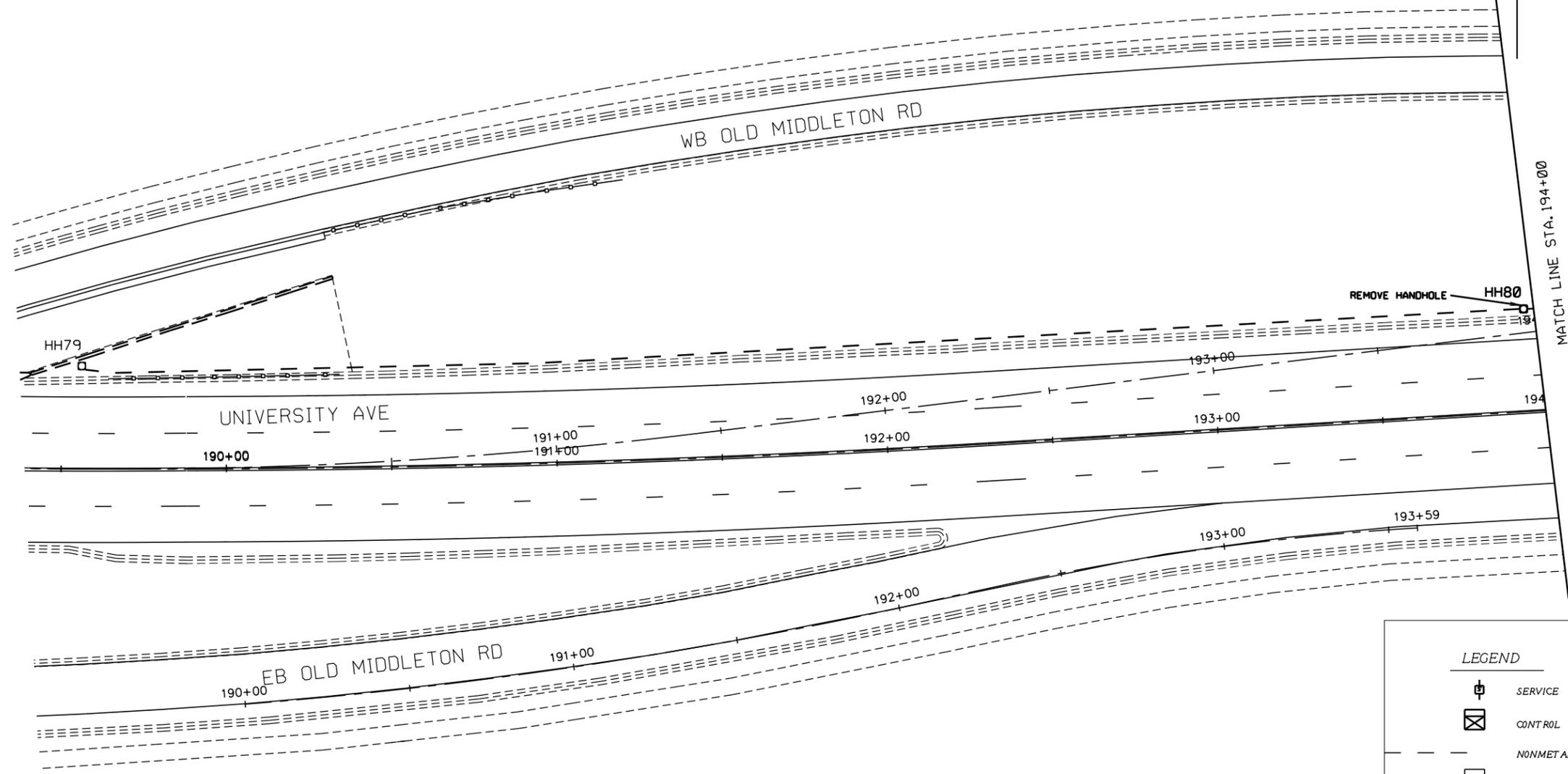
GENERAL NOTES:

- ALL PROPOSED LUMINAIRES SHALL BE LED, EXCEPT AS NOTED.
- COORDINATE ALL MODIFICATIONS OF EXISTING LIGHTING CIRCUITS WITH THE CITY OF MADISON TRAFFIC ENGINEERING DEPARTMENT.
- PERFORM CIRCUIT CONDUCTOR SPLICES IN HANDHOLES USING APPROVED SUBMERSIBLE MULTI-TAP TERMINAL BLOCK TYPE CONNECTORS. CONNECTORS SHALL BE CONSIDERED INCIDENTAL TO THE ELECTRICAL WIRE LIGHTING BID ITEM.
- REMOVAL OF ALL BELOW GRADE WIRING SHALL BE INCIDENTAL TO THE REMOVE STREET LIGHT POLE AND REMOVE STREET LIGHT BASE BID ITEMS.
- CONTACT CITY OF MADISON FORESTRY 48-HOURS PRIOR TO INSTALLING STREET LIGHTS IF TREE TRIMMING IS NECESSARY.
- CHECK FOR OVERHEAD UTILITY CONFLICTS PRIOR TO CONSTRUCTING CONCRETE BASES.
- INSTALL CONDUIT BY BORING WHEN CROSSING ROADWAYS ONLY IF NECESSARY. CONDUIT CROSSING ROADWAYS MAY BE INSTALLED BY TRENCHING IF THE CONSTRUCTION MANAGER DETERMINES BORING TO BE UNNECESSARY.
- PLACE LIGHTING CONDUITS IN THE SAME TRENCH AS TRAFFIC SIGNAL CONDUITS WHEN POSSIBLE.
- CLEARLY LABEL UNUSED CONDUCTORS AS "SPARE" IN ALL CONDUIT RUNS CONTAINING UNUSED CONDUCTORS.
- THE PROPOSED STREET LIGHTING MODIFICATIONS SHALL BE MADE TO EXISTING CITY OF MADISON STREET LIGHTING CIRCUIT 1414 (120/240V). THE SERVICE CABINET IS LOCATED AT THE INTERSECTION OF UNIVERSITY AVE AND SEGOE RD.
- PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).





MATCH LINE STA. 194+00



LEGEND

-  SERVICE POLE
-  CONTROL CABINET
-  NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
-  LOOP DETECTOR CONDUIT 1" NONMETALLIC
-  SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
-  SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
-  STREET LIGHT
-  HANDHOLE
-  SIGNAL HEAD NUMBER
-  RED CIRCULAR INDICATOR
-  YELLOW CIRCULAR INDICATOR
-  GREEN CIRCULAR INDICATOR
-  RED ARROW
-  YELLOW ARROW
-  GREEN ARROW
-  EVP DETECTOR HEAD

CONSTRUCTION NOTES:

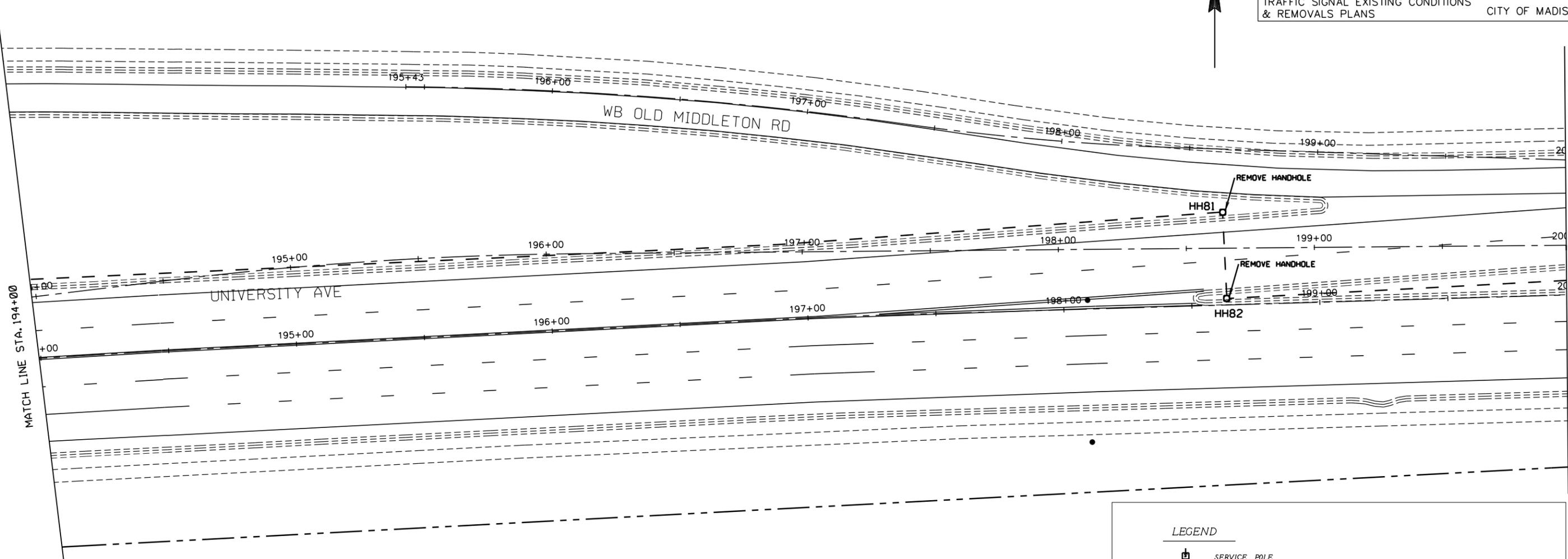
1. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
2. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
3. THE CONTRACTOR SHALL DO ALL WORK IN ACCORDANCE WITH "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION" AND ALL ADDENDUMS THERETO. ALL CONDUIT SHALL BE PVC, SCHEDULE 80 UNDER PAVEMENT OR SCHEDULE 40 OTHERWISE. PULL WIRE REQUIRED AS PER STANDARD SPECIFICATIONS.
4. THE CONTRACTOR SHALL CALL MIKE CHRISTOPH (266-9031) AT THE TRAFFIC ENGINEERING SHOP AT LEAST 24-HOURS IN ADVANCE OF POURING BASES OR BURYING CONDUIT TO ARRANGE FOR INSPECTION. ANY WORK COMPLETED WITHOUT INSPECTION IS SUBJECT TO REJECTION.
5. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH79. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR.

PLOT SCALE: -----

PLOT NAME: -----

REV. DATE: -----

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



PLOT SCALE: -----
PLOT NAME: -----
REV. DATE: -----

MATCH LINE STA. 194+00

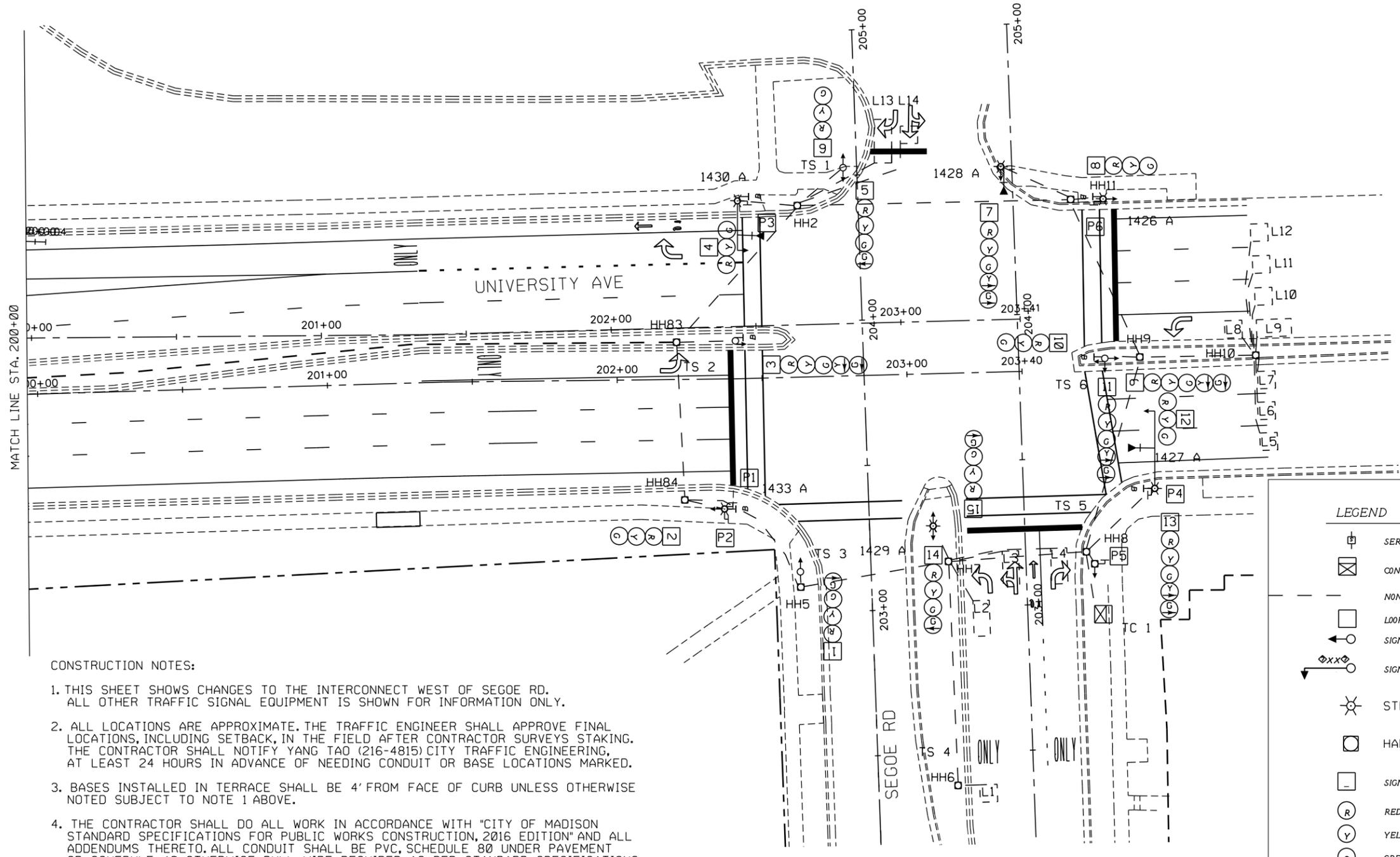
MATCH LINE STA. 200+00

CONSTRUCTION NOTES:

1. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
2. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
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5. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH79. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR.

LEGEND

- SERVICE POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- STREET LIGHT
- HANDHOLE
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
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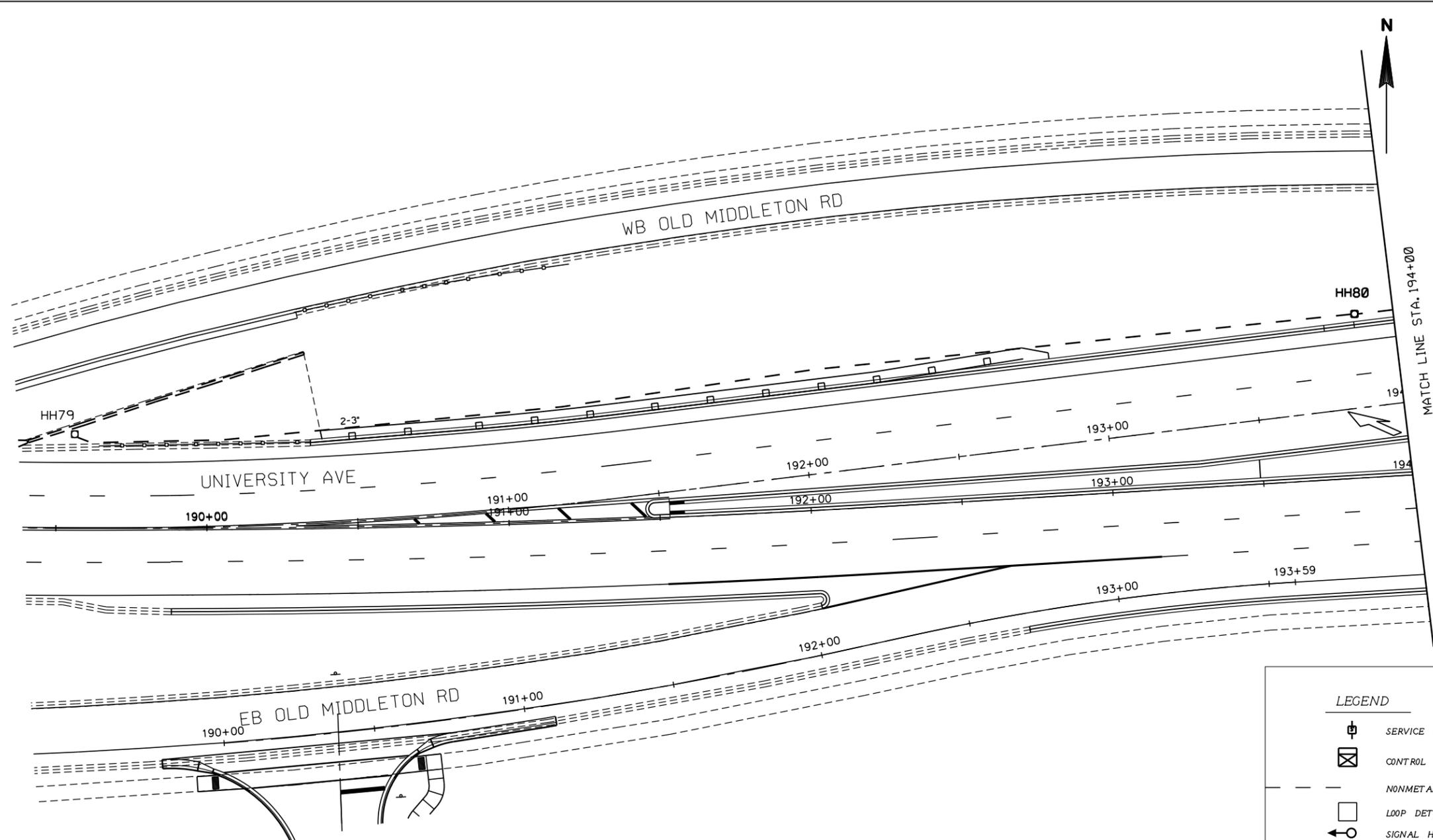


- CONSTRUCTION NOTES:
1. THIS SHEET SHOWS CHANGES TO THE INTERCONNECT WEST OF SEGOE RD. ALL OTHER TRAFFIC SIGNAL EQUIPMENT IS SHOWN FOR INFORMATION ONLY.
 2. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
 3. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
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 6. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH83. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR. NEW INTERCONNECT SHALL BE INSTALLED BETWEEN TC2 AND TC1.

LEGEND

- SERVICE POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
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- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DETECTOR HEAD

PLOT SCALE: -----
 PLOT NAME: -----
 REV. DATE: -----
 ORIGINATOR : KIMLEY HORN AND ASSOCIATES



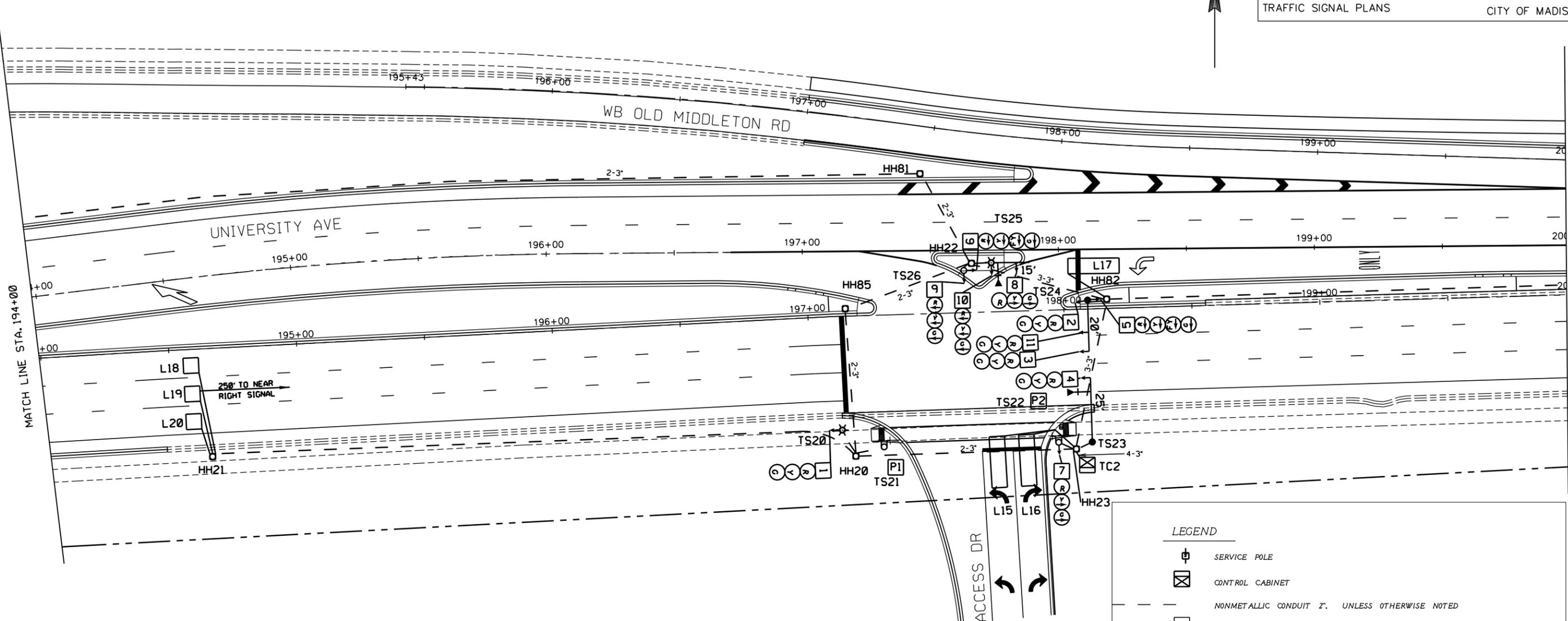
CONSTRUCTION NOTES:

1. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
2. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
3. THE CONTRACTOR SHALL DO ALL WORK IN ACCORDANCE WITH "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION" AND ALL ADDENDUMS THERETO. ALL CONDUIT SHALL BE PVC, SCHEDULE 80 UNDER PAVEMENT OR SCHEDULE 40 OTHERWISE. PULL WIRE REQUIRED AS PER STANDARD SPECIFICATIONS.
4. THE CONTRACTOR SHALL CALL MIKE CHRISTOPH (266-9031) AT THE TRAFFIC ENGINEERING SHOP AT LEAST 24-HOURS IN ADVANCE OF POURING BASES OR BURYING CONDUIT TO ARRANGE FOR INSPECTION. ANY WORK COMPLETED WITHOUT INSPECTION IS SUBJECT TO REJECTION.
5. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH79. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR.
6. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

LEGEND

- SERVICE POLE
- CONTROL CABINET
- NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
- LOOP DETECTOR CONDUIT 1" NONMETALLIC
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- STREET LIGHT
- HANDHOLE
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DETECTOR HEAD

PLOT SCALE: -----
 PLOT NAME: -----
 REV. DATE: -----
 ORIGINATOR : KIMLEY HORN AND ASSOCIATES



LEGEND

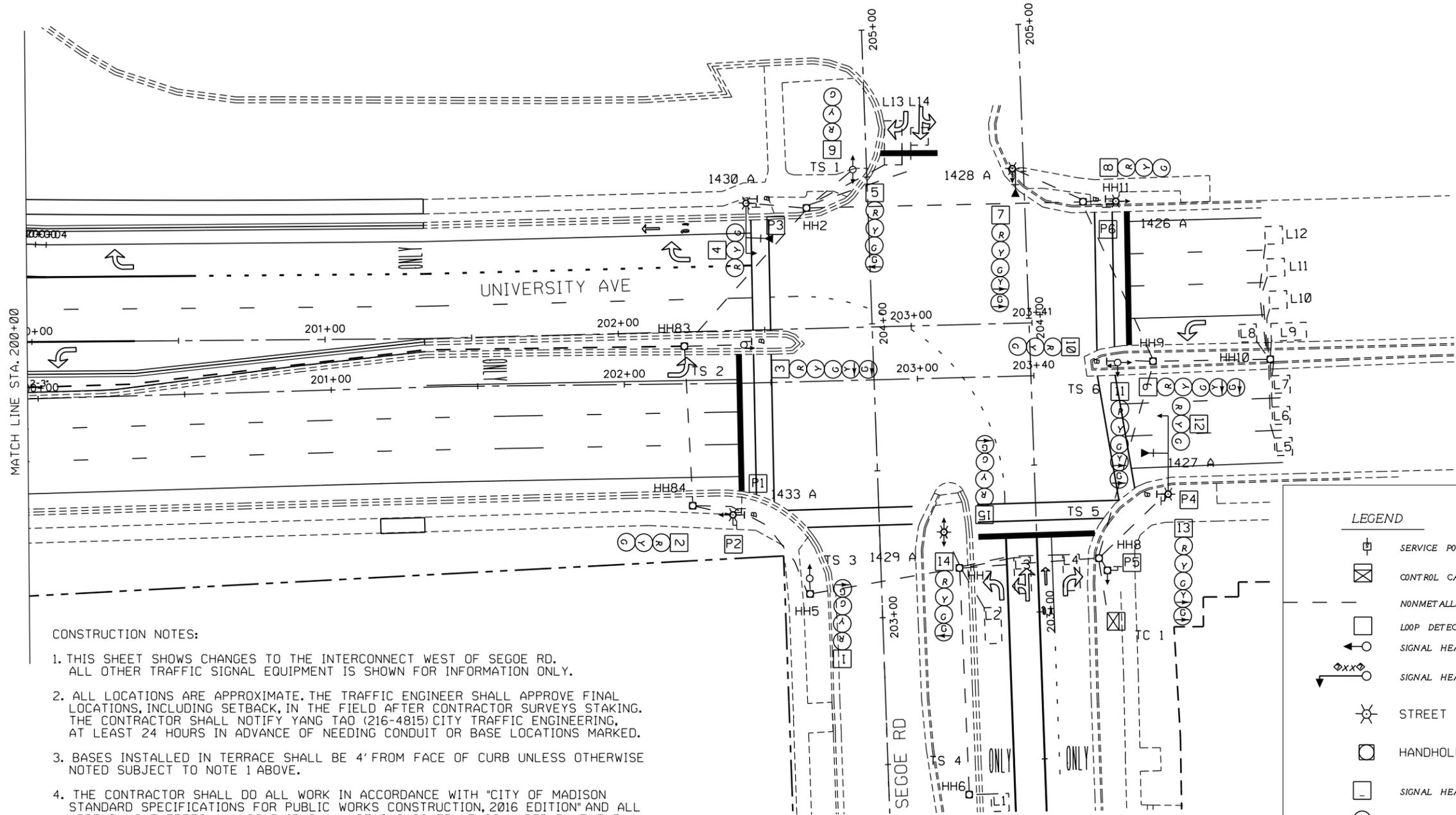
	SERVICE POLE
	CONTROL CABINET
	NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
	LOOP DETECTOR CONDUIT 1" NONMETALLIC
	SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
	SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
	MONOTUBE BASE, POLE, 15'-30' ARM
	STREET LIGHT
	HANDHOLE
	SIGNAL HEAD NUMBER
	RED CIRCULAR INDICATOR
	YELLOW CIRCULAR INDICATOR
	GREEN CIRCULAR INDICATOR
	RED ARROW
	YELLOW ARROW
	GREEN ARROW
	EVP DETECTOR HEAD

CONSTRUCTION NOTES:

1. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
2. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
3. THE CONTRACTOR SHALL DO ALL WORK IN ACCORDANCE WITH "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION" AND ALL ADDENDUMS THERETO. ALL CONDUIT SHALL BE PVC, SCHEDULE 80 UNDER PAVEMENT OR SCHEDULE 40 OTHERWISE. PULL WIRE REQUIRED AS PER STANDARD SPECIFICATIONS.
4. THE CONTRACTOR SHALL CALL MIKE CHRISTOPH (266-9031) AT THE TRAFFIC ENGINEERING SHOP AT LEAST 24-HOURS IN ADVANCE OF POURING BASES OR BURYING CONDUIT TO ARRANGE FOR INSPECTION. ANY WORK COMPLETED WITHOUT INSPECTION IS SUBJECT TO REJECTION.
5. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH79. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR.
6. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

PLOT SCALE: -----
PLOT NAME: -----
REV. DATE: -----

ORIGINATOR : KIMLEY HORN AND ASSOCIATES



- CONSTRUCTION NOTES:
1. THIS SHEET SHOWS CHANGES TO THE INTERCONNECT WEST OF SEGOE RD. ALL OTHER TRAFFIC SIGNAL EQUIPMENT IS SHOWN FOR INFORMATION ONLY.
 2. ALL LOCATIONS ARE APPROXIMATE. THE TRAFFIC ENGINEER SHALL APPROVE FINAL LOCATIONS, INCLUDING SETBACK, IN THE FIELD AFTER CONTRACTOR SURVEYS STAKING. THE CONTRACTOR SHALL NOTIFY YANG TAO (216-4815) CITY TRAFFIC ENGINEERING, AT LEAST 24 HOURS IN ADVANCE OF NEEDING CONDUIT OR BASE LOCATIONS MARKED.
 3. BASES INSTALLED IN TERRACE SHALL BE 4' FROM FACE OF CURB UNLESS OTHERWISE NOTED SUBJECT TO NOTE 1 ABOVE.
 4. THE CONTRACTOR SHALL DO ALL WORK IN ACCORDANCE WITH "CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2016 EDITION" AND ALL ADDENDUMS THERETO. ALL CONDUIT SHALL BE PVC, SCHEDULE 80 UNDER PAVEMENT OR SCHEDULE 40 OTHERWISE. PULL WIRE REQUIRED AS PER STANDARD SPECIFICATIONS.
 5. THE CONTRACTOR SHALL CALL MIKE CHRISTOPH (266-9031) AT THE TRAFFIC ENGINEERING SHOP AT LEAST 24-HOURS IN ADVANCE OF POURING BASES OR BURYING CONDUIT TO ARRANGE FOR INSPECTION. ANY WORK COMPLETED WITHOUT INSPECTION IS SUBJECT TO REJECTION.
 6. INTERCONNECT TO THE WEST MUST BE MAINTAINED/RE-ESTABLISHED THROUGH HH83. EXISTING INTERCONNECT SHALL BE PULLED BACK FROM TC1 TO HH79 THEN REINSTALLED IN PROPOSED CONDUIT TO TC2. EXCESS CABLE SHALL BE CUT/REMOVED BY THE CONTRACTOR. NEW INTERCONNECT SHALL BE INSTALLED BETWEEN TC2 AND TC1.
 6. PLACE PULL WIRE IN CONDUIT PER CITY OF MADISON STANDARD SPECIFICATION 602.3(e).

LEGEND

	SERVICE POLE
	CONTROL CABINET
	NONMETALLIC CONDUIT 2" UNLESS OTHERWISE NOTED
	LOOP DETECTOR CONDUIT 1" NONMETALLIC
	SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
	SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
	STREET LIGHT
	HANDHOLE
	SIGNAL HEAD NUMBER
	RED CIRCULAR INDICATOR
	YELLOW CIRCULAR INDICATOR
	GREEN CIRCULAR INDICATOR
	RED ARROW
	YELLOW ARROW
	GREEN ARROW
	EVP DETECTOR HEAD

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

REV. DATE: _____

PLOT NAME: _____

PLOT SCALE: _____

PROJECT ID: _____
INTERSECTION: UNIVERSITY AVE & ACCESS DR

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

DATE: 12/30/2016

TC2 TO	JUMPER	# OF COND.	HEAD NO.	PHASE	SIGNAL INDICATION WIRE COLOR							PED BUTTON	OTHER
					RED	YELLOW	GREEN	<RED	<YELLOW>	<GREEN>	D/WALK		
TS22		12	7	OLA	RED	ORG	GRN						
			P2	6						BLK	BLU		
TS21		12	P1	6							BLK	BLU	
TS20		12	1	6	RED	ORG	GRN						
TS23		12	4	6	RED	ORG	GRN						
TS24		12	2	6	RED	ORG	GRN						
			3	6	RED	ORG	GRN						
			5	5	RED/BLK	ORG/BLK	GRN/BLK		ORG/BLK				
			11	6	RED	ORG	GRN						
TS25		12	8	OLA	RED	ORG	GRN						
			10	8	RED/BLK	ORG/BLK	GRN/BLK						
TS26		12	6	5	RED/BLK	ORG/BLK	GRN/BLK		ORG/BLK				
			9	8	RED/BLK	ORG/BLK	GRN/BLK						

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
TC2	TS22
TS22	TS21
TS21	TS20
TS22	TS23
TS23	TS24
TS24	TS25
TS25	TS26
TS23	TC2

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
HH20	TS20
HH20	TS21
HH23	TS22
HH23	TS23
HH82	TS24
HH22	TS25
HH22	TS26

LIGHTING UF 12 AWG W/GROUND	
FROM	TO

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
TC2	TS23
TC2	TS25

- NOTES:
- USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
 - ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 12" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - AT THE SIGNAL BASES, CONNECT ONE TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.
 - "OTHER" COLUMN MAY INCLUDE SHADOW BOX (BLANK OUT) SIGN.

PLOT SCALE: _____
 PLOT NAME: _____
 REV. DATE: _____
 ORIGINATOR : KIMLEY HORN AND ASSOCIATES

CONDUIT (SIGNALS)

FROM	TO	60231		60223		60222		COMMENT
		TRENCHED		TRENCHED		TRENCHED		
		SCHEDULE 40		SCHEDULE 40		SCHEDULE 80		
2"	3"	2"	3"	3"	3"	(LF)	(LF)	
HH83	HH82	-	810	-	-	-	-	2-3"
TC2	HH23	-	20	-	-	-	-	4-3"
HH23	TS22	10	-	-	-	-	-	1-2"
HH23	TS23	10	-	-	-	-	-	1-2"
HH23	HH20	-	60	-	112	-	-	2-3"
HH20	TS20	15	-	-	-	-	-	1-2"
HH20	TS21	15	-	-	-	-	-	1-2"
HH20	HH21	250	-	-	-	-	-	1-2"
HH23	HH82	-	39	-	144	-	-	3-3"
HH82	TS24	10	-	-	-	-	-	1-2"
HH82	HH22	-	30	-	135	-	-	3-3"
HH22	TS25	10	-	-	-	-	-	1-2"
HH22	TS26	5	-	-	-	-	-	1-2"
HH22	HH81	-	-	-	80	-	-	2-3"
HH81	HH80	-	730	-	-	-	-	2-3"
HH80	HH79	425	-	-	-	-	-	1-2"
HH20	HH85	-	-	-	120	-	-	2-3"
HH85	HH22	-	-	-	104	-	-	2-3"
TOTALS		750	1689	-	695	-	-	

**CONDUIT LOOP DETECTOR
LOOP DETECTOR LEAD IN CABLE AND
LOOP DETECTOR WIRE**

LOOP NO.	652.0800	655.0700	655.0800
	CONDUIT	LEAD IN	LOOP
	LOOP DET	CABLE	WIRE
	(LF)	(LF)	(LF)
L15	82	20	216
L16	70	20	192
L17	69	80	190
L18	67	355	158
L19	56	355	136
L20	45	355	114
TOTALS	389	1185	1006

TRAFFIC SIGNAL CABLE, NO. 12

LOCATION	655.0255
	NO. OF CONDUCTORS
	12
	(LF)
TC2 TO TS22	60
TC2 TO TS21	150
TC2 TO TS20	145
TC2 TO TS23	55
TC2 TO TS24	120
TC2 TO TS25	175
TC2 TO TS26	170
TOTALS	875

TRAFFIC SIGNAL INTERCONNECT CABLE (COPPER)

LOCATION	674.0300	674.0400	655.0410
	REMOVE	REINSTALL	COMM CABLE
	CABLE	CABLE	INST. IN CONDUIT
	(LF)	(LF)	(LF)
HH79 TO TC1	1570	-	-
HH79 TO TC2	-	1000	-
TC2 TO TC1	-	-	740
TOTALS	1570	1000	740

CONCRETE BASES

STRUCTURE	STATION	OFFSET	CONCRETE BASES					STANDARD 11 1/2 INCH					TRAFFIC SIGNAL					LED TYPE SPECIAL			
			60411		60407		60413		16"		30'		MONOTUBE		30'		657.0420		657.0425		
			TYPE G	TYPE LB-3	TYPE LB-8	TYPE P	TYPE	STEEL	7 GAUGE	TYPE 9	11 GAUGE	13 FT.	15 FT.	15 FT.	20 FT.	25 FT.	STANDARDS ALUM.		TROMBONE ARM	MONOTUBE	MONOTUBE
			EACH	EACH	EACH	EACH	10	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
TC 2	198+12.26	82.13'RT	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TS 20	197+16.70	68.71'RT	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	
TS 21	197+32.98	75.39'RT	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
TS 22	198+01.16	74.20'RT	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
TS 23	198+14.27	74.19'RT	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	1	
TS 24	198+12.89	18.86'RT	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	1	-	-	
TS 25	197+75.39	04.95'RT	-	-	1	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	
TS 26	197+64.63	06.91'RT	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
TOTALS			3	1	1	1	2	2	1	2	1	1	1	2	1	1	1	1	1	1	

PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

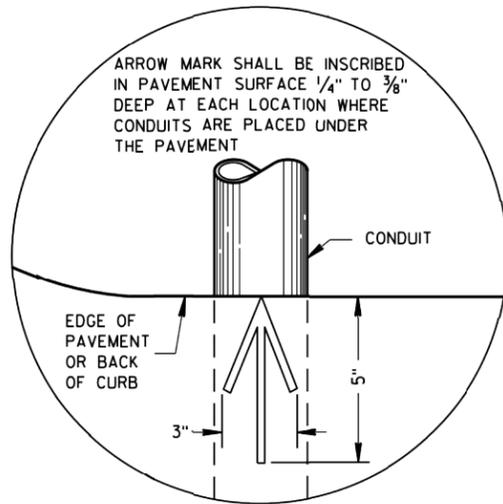
ELECTRICAL HANDHOLES

STRUCTURE	STATION	OFFSET	ELECTRICAL HANDHOLES			COMMENT
			60702 TYPE 1 EACH	60706 TYPE 5 EACH	UTILITY ACCESS STRUCTURE	
HH2			-	-	-	EXISTING
HH83	202+24.08	3.96' RT	-	-	-	EXISTING
HH84			-	-	-	EXISTING
HH5			-	-	-	EXISTING
HH6			-	-	-	EXISTING
HH7			-	-	-	EXISTING
HH8			-	-	-	EXISTING
HH9			-	-	-	EXISTING
HH10			-	-	-	EXISTING
HH11			-	-	-	EXISTING
HH82	198+20.33	18.53' RT	-	-	1	NEW
HH81	197+47.84	30.98' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
HH80	193+87.26	31.80' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
HH79	189+57.74	32.02' LT	-	-	-	EXISTING
HH20	197+21.90	78.91' RT	-	1	-	NEW
HH21	194+63.18	69.51' RT	1	-	-	NEW
HH22	197+67.66	4.13' RT	-	1	-	NEW
HH23	198+08.02	76.85' RT	-	-	1	NEW
LHH15	189+63.88	31.91' LT	-	-	-	EXISTING
LHH1	191+31.63	31.50' LT	1	-	-	NEW
LHH16	197+59.21	32.22' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
LHH17	197+62.06	54.54' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
LHH18	199+98.11	41.29' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
LHH19	201+74.90	40.50' LT	-	-	-	EXISTING
LHH20	201+84.45	25.73' LT	1	-	-	REPLACE EXISTING IN NEW LOCATION
HH85	197+18.22	21.40' RT	1	-	-	
TOTALS			9	2	2	

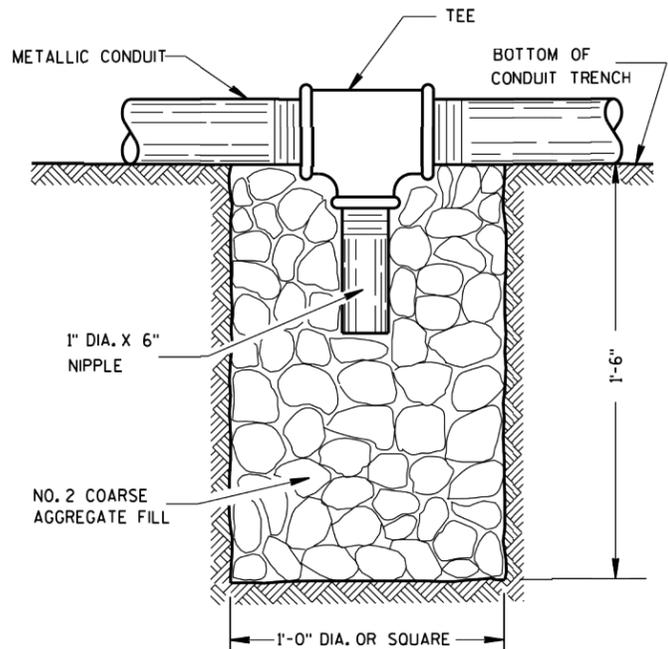
TRAFFIC SIGNAL FACES

HEAD NO.	SIGNAL BASE NO.	TYPE OF MOUNT	658.0412					
			658.0110 3-12 INCH VERTICAL EACH	658.0120 4-12 INCH VERTICAL EACH	658.0155 3-12 INCH HORIZONTAL EACH	PEDESTRIAN 12-INCH SIGNAL FACES EACH	658.0215 3-SEC. BACKPLATE EACH	658.0220 4-SEC. BACKPLATE EACH
			1	TS20	POLE	1	-	-
2	TS24	POLE	1	-	-	-	1	-
3	TS24	MAST ARM	2	-	-	-	1	-
4	TS23	MAST ARM	1	-	-	-	1	-
5	TS24	POLE	-	1	-	-	-	1
6	TS26	POLE	-	1	-	-	-	1
7	TS23	POLE	1	-	-	-	1	-
8	TS24	MAST ARM	-	-	1	-	1	-
9	TS26	POLE	1	-	-	-	1	-
10	TS25	POLE	1	-	-	-	1	-
P1	TS21	POLE	-	-	-	1	-	-
P2	TS22	POLE	-	-	-	1	-	-
TOTALS			8	2	1	2	8	2

PLOT SCALE: _____
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 ORIGINATOR : KIMLEY HORN AND ASSOCIATES

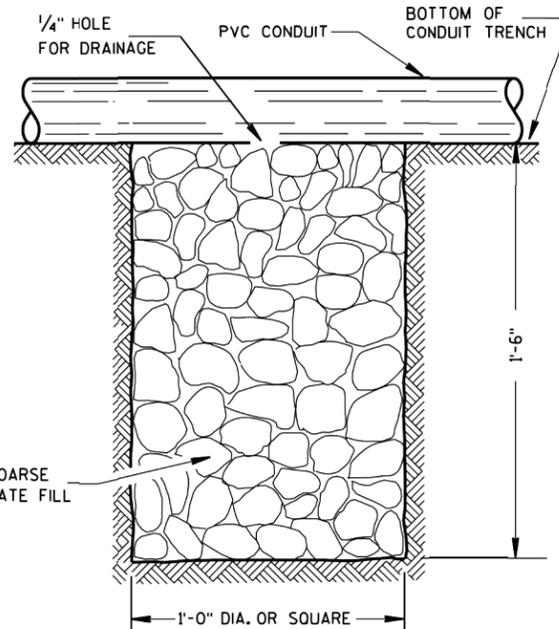


PLAN VIEW
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

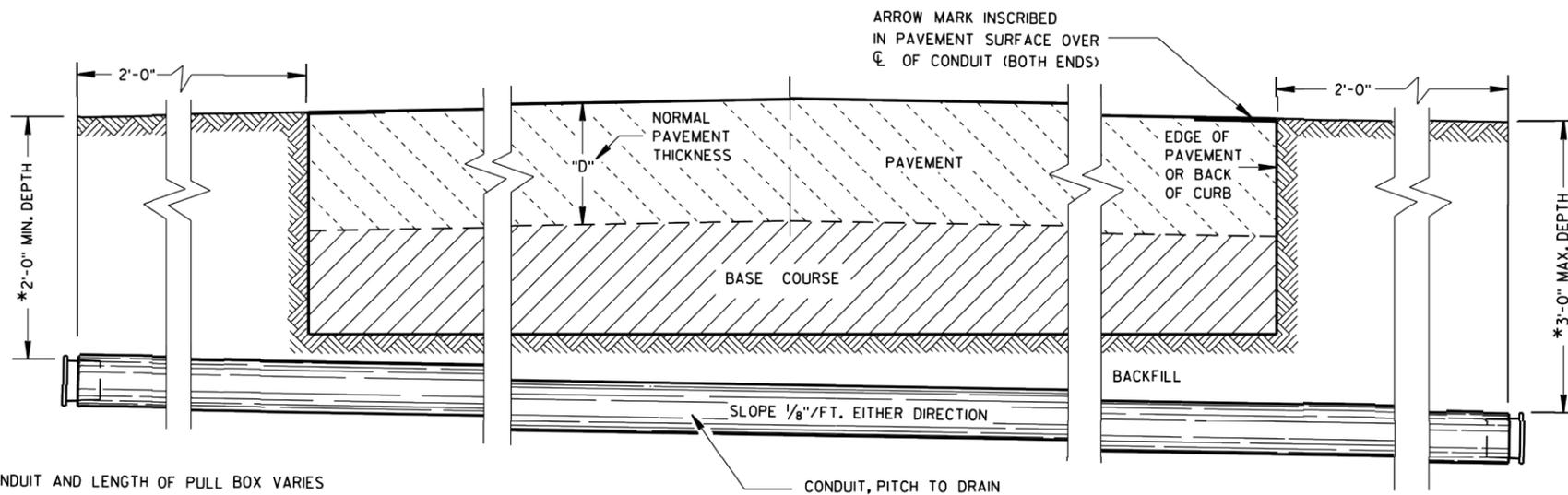
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
SHEET NO. E-17	FHWA

9C3: Transformer/Pedestal Bases

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

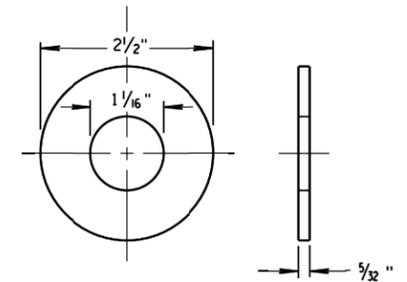
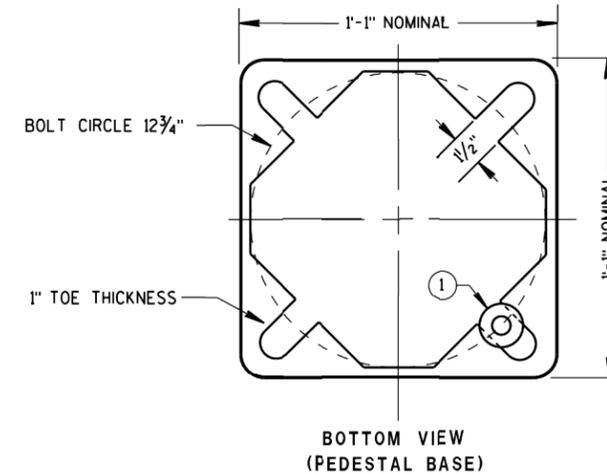
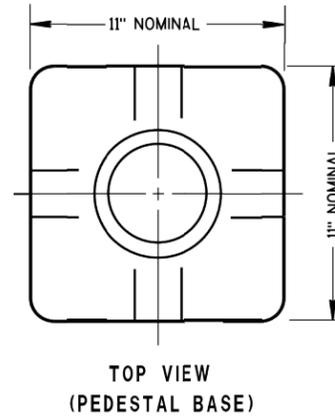
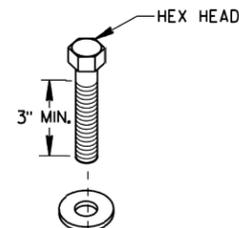
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

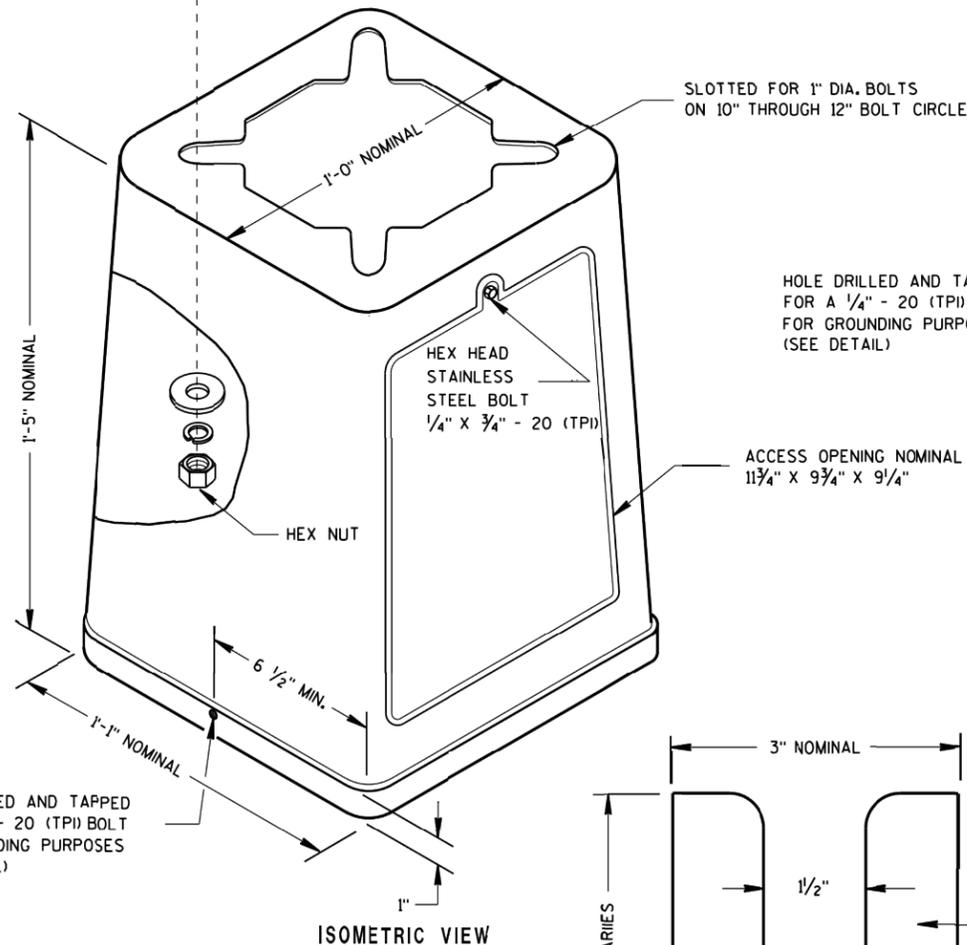
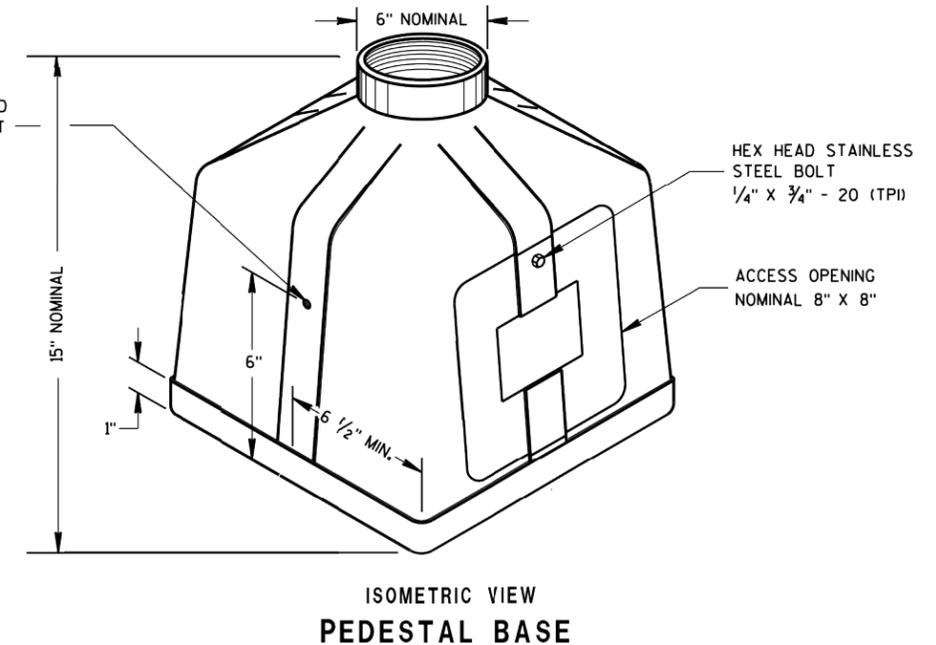
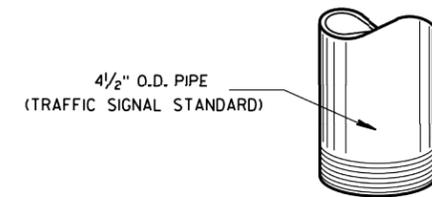
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

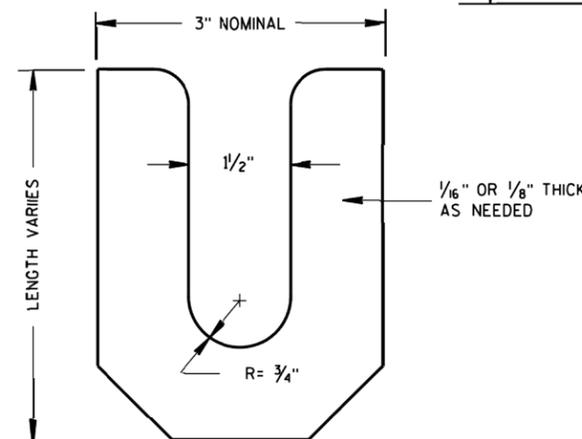


ZINC COATED STEEL WASHER TO BE PROVIDED BY THE CONTRACTOR

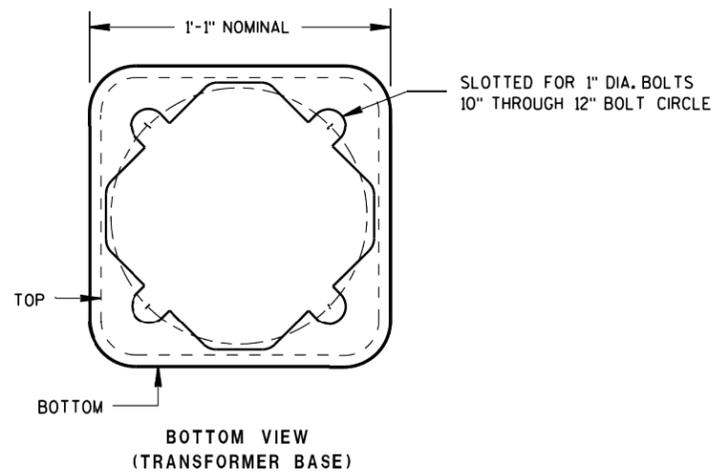
PEDESTAL BASE WASHER ①



HOLE DRILLED AND TAPPED FOR A 1/4" - 20 (TPI) BOLT FOR GROUNDING PURPOSES (SEE DETAIL)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 DATE /S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA

SHEET NO.
E-18

6

6

S.D.D. 9 C 3-4

S.D.D. 9 C 3-4

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED, NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

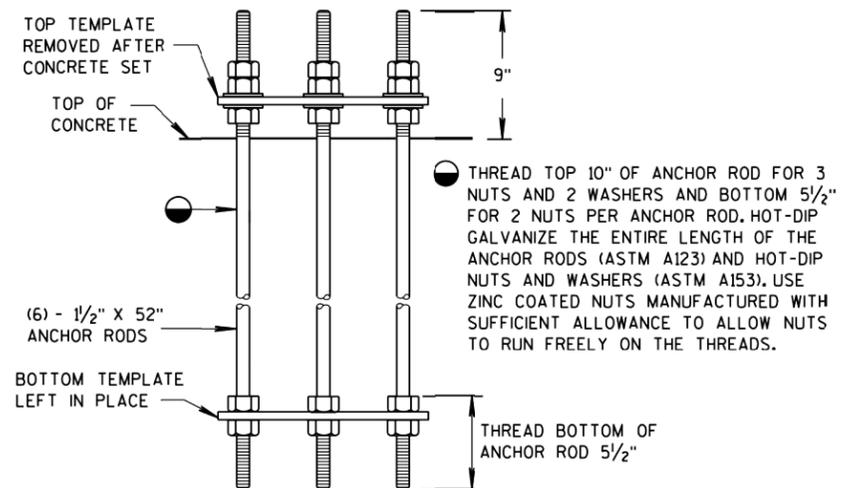
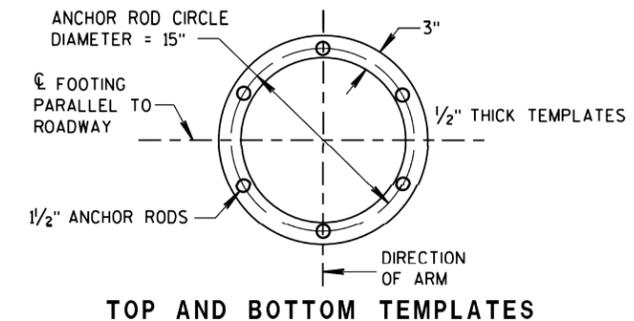
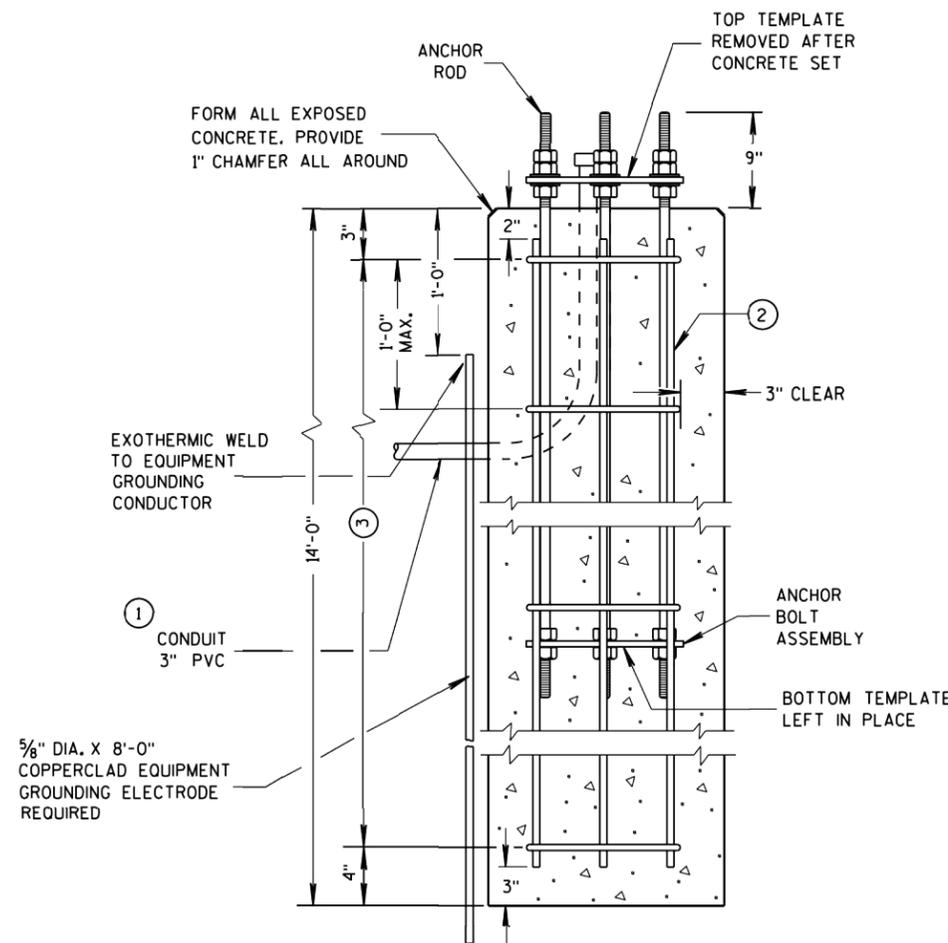
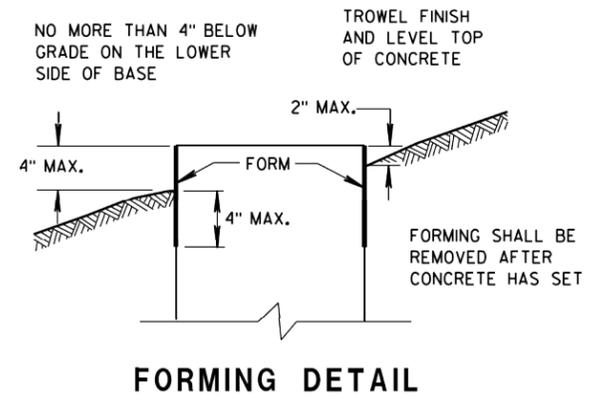
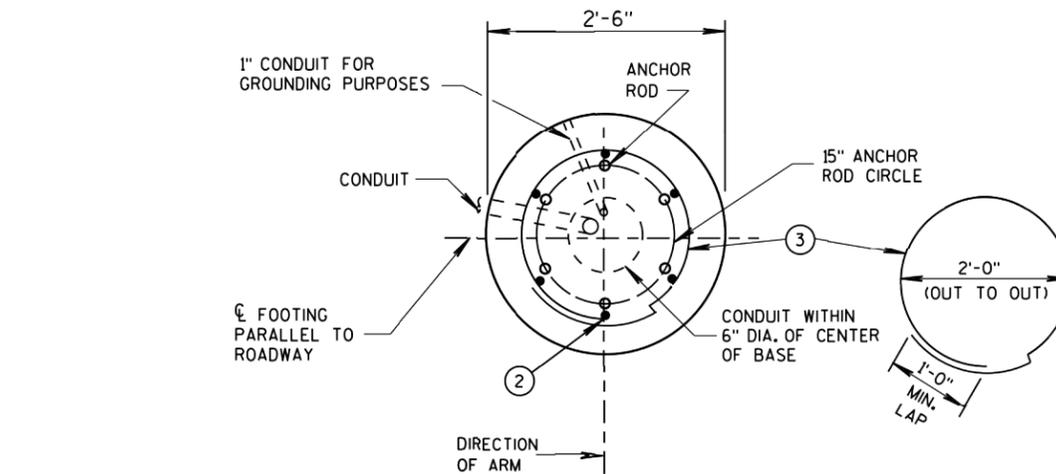
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES, (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER-RUN), EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

② (6) NO. 6 X 13'-7" BAR STEEL REINFORCEMENT.

③ (15) NO. 4 X 7'-4" BAR STEEL REINFORCEMENT @ 1'-0" MAX. C-C.

CONCRETE MASONRY	fc=3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy=60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 641.2.2.3 OF THE STANDARD SPECIFICATION)	fy=55,000 p.s.i.
TEMPLATES, ASTM, A709 GRADE 36	fy=36,000 p.s.i.



**CONCRETE BASE TYPE 10
(FOR TYPE 9 & 10 POLES)**

TO BE USED WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION. SEE S.D.D. 9C13-2 WHEN GROUND ELEVATION AT BASE IS LOWER THAN HIGH POINT OF ROADWAY ELEVATION.

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	69
LBS. OF VERTICAL BAR STEEL	122

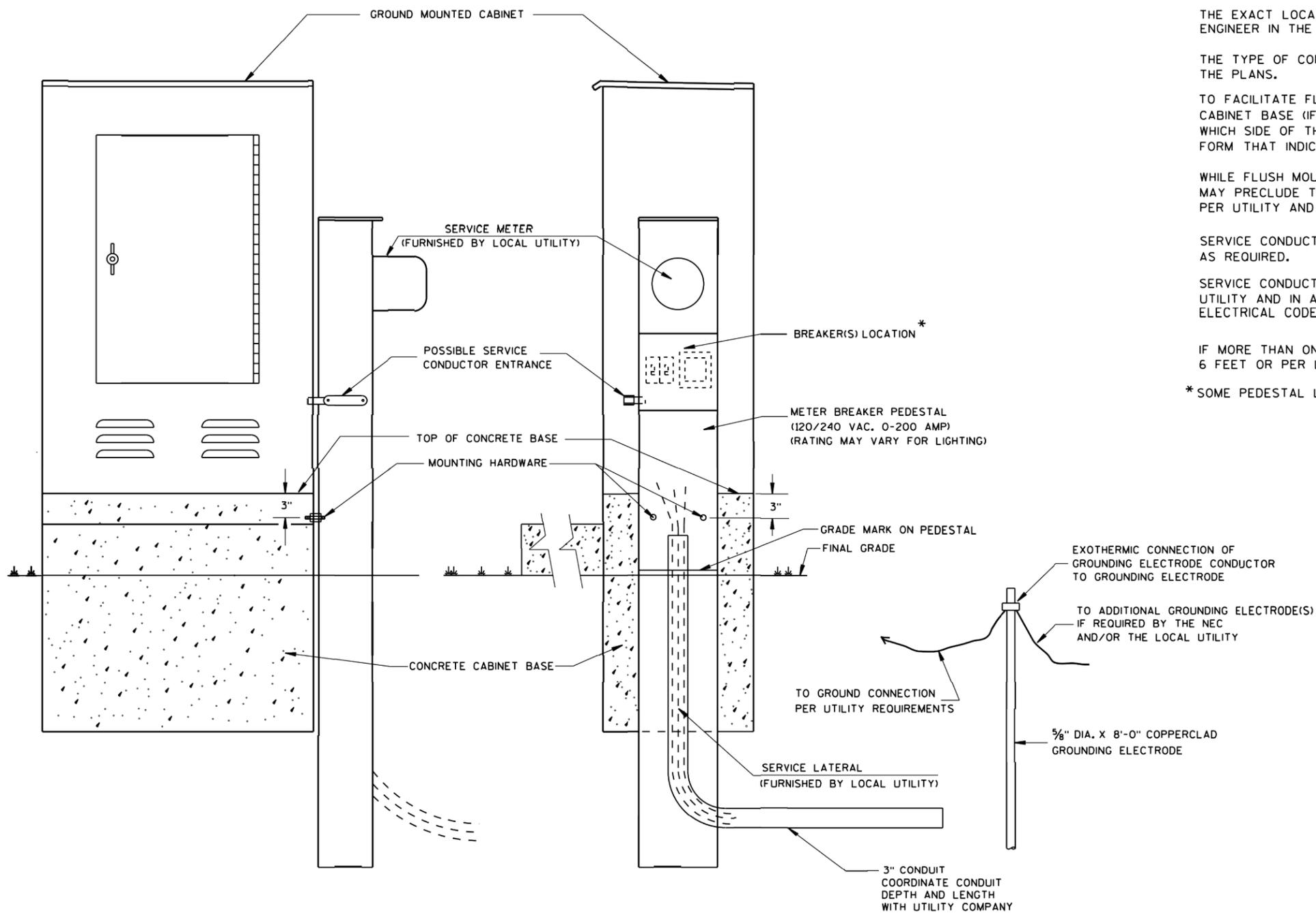
SHEET NO. E-19	APPROVED May 2016 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
	FHWA	

CONCRETE BASE TYPE 10	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	

6

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9D1: Cabinet Service Installation (Meter Breaker Pedestal)



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

TYPICAL CABINET SERVICE INSTALLATION

CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept. 2014 /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA

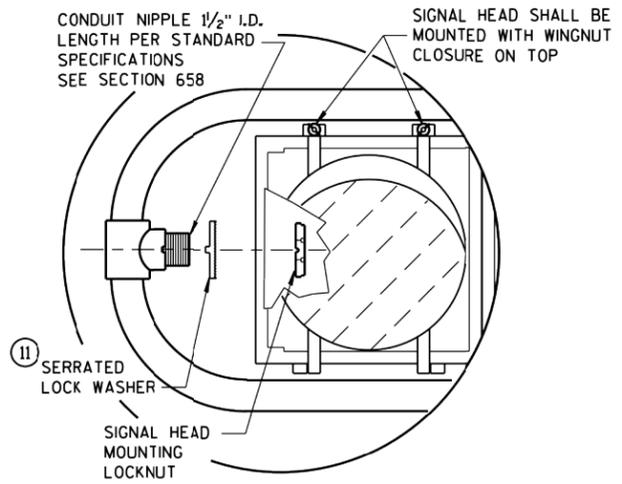
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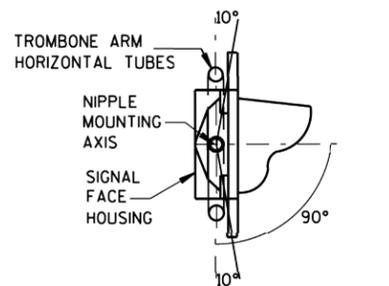
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S.D.D. 9 D 1-5

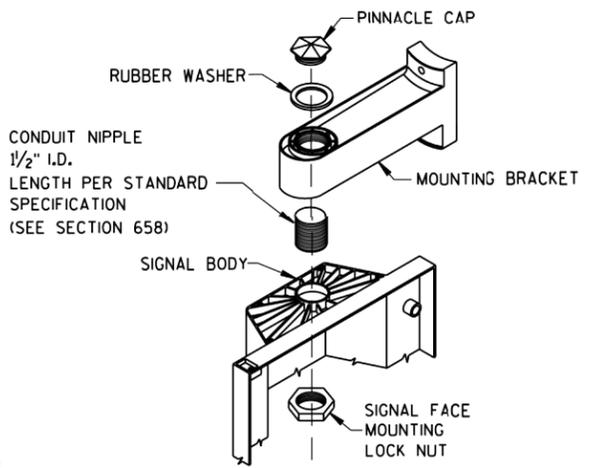
S.D.D. 9 D 1-5



HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *
* SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

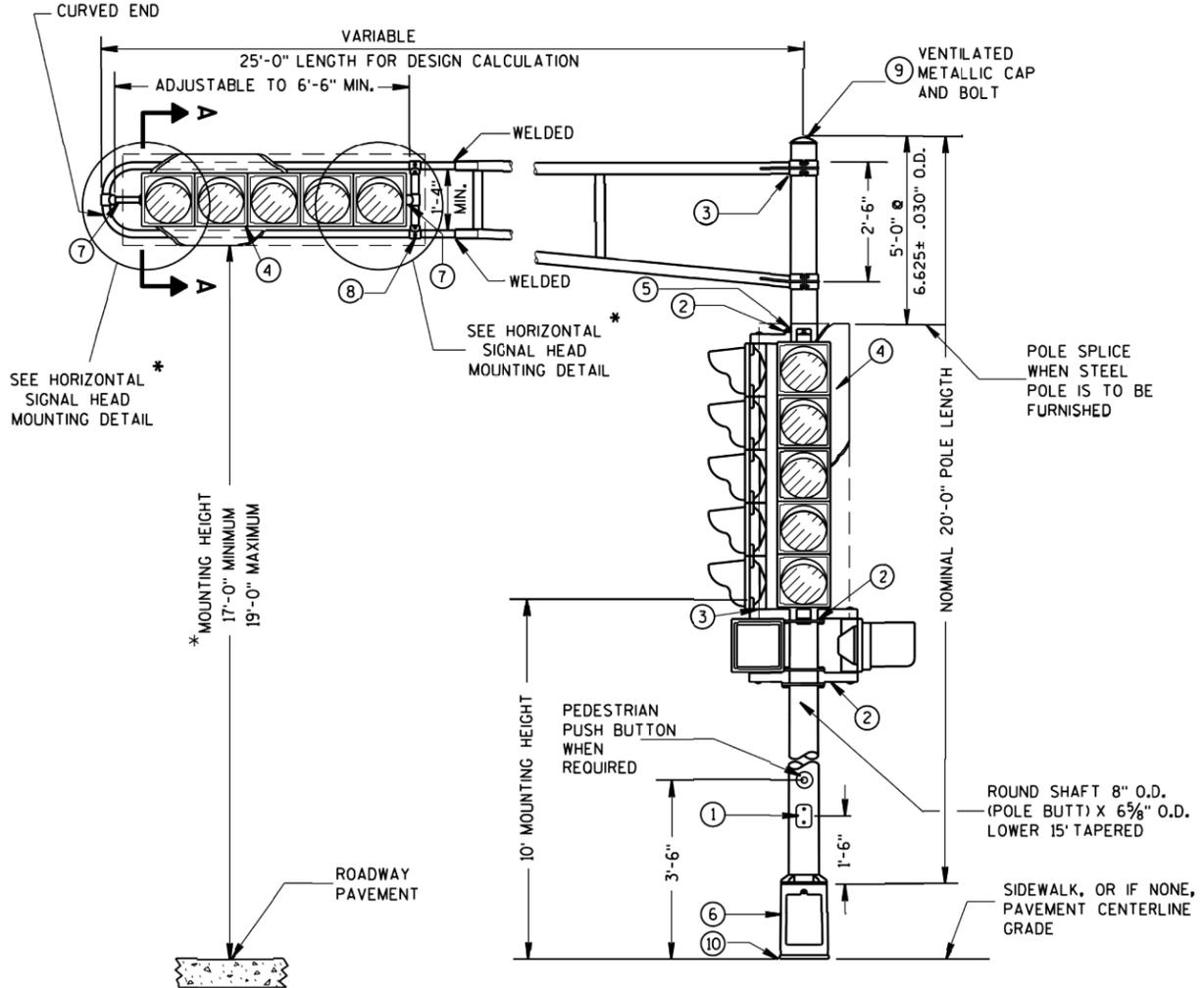


SECTION A-A
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

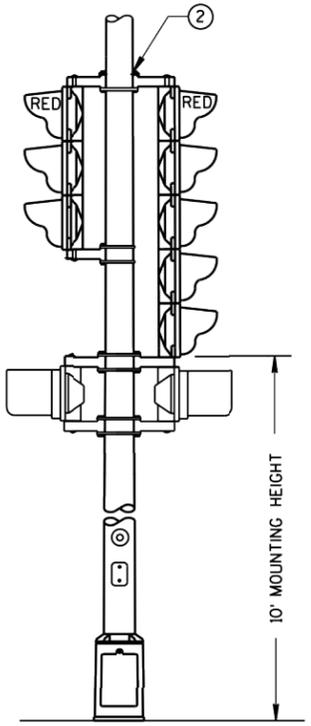


SIGNAL FACE MOUNTING DETAIL (BANDED)

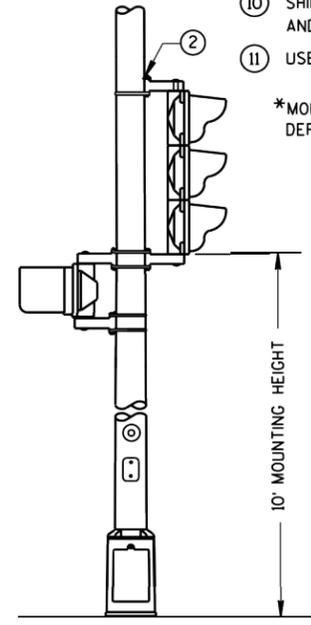
- GENERAL NOTES**
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
- POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.
- SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.
- A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652 SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.
- TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.
- WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.
- ① 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
 - ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
 - ③ GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/8" HOLE IN POLE SHAFT FOR WIRING.
 - ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
 - ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
 - ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
 - ⑦ MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1/2 INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658).
 - ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" LONG-20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
 - ⑨ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
 - ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
 - ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.
- *MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.



(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

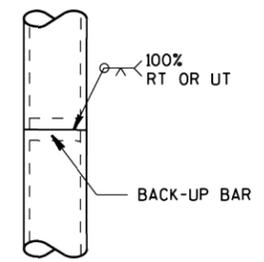


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

TYPE 2 POLE MOUNTING CONFIGURATION

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL

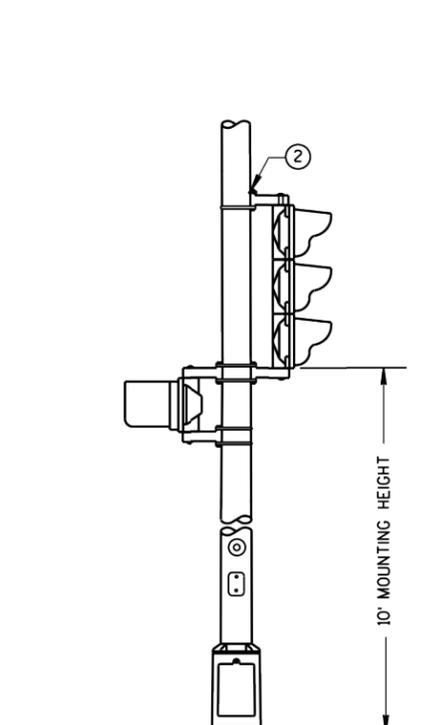
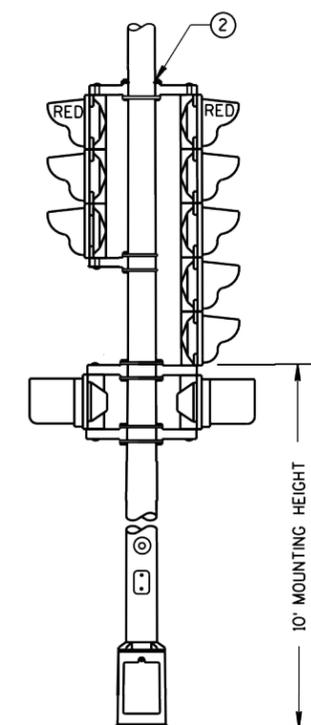
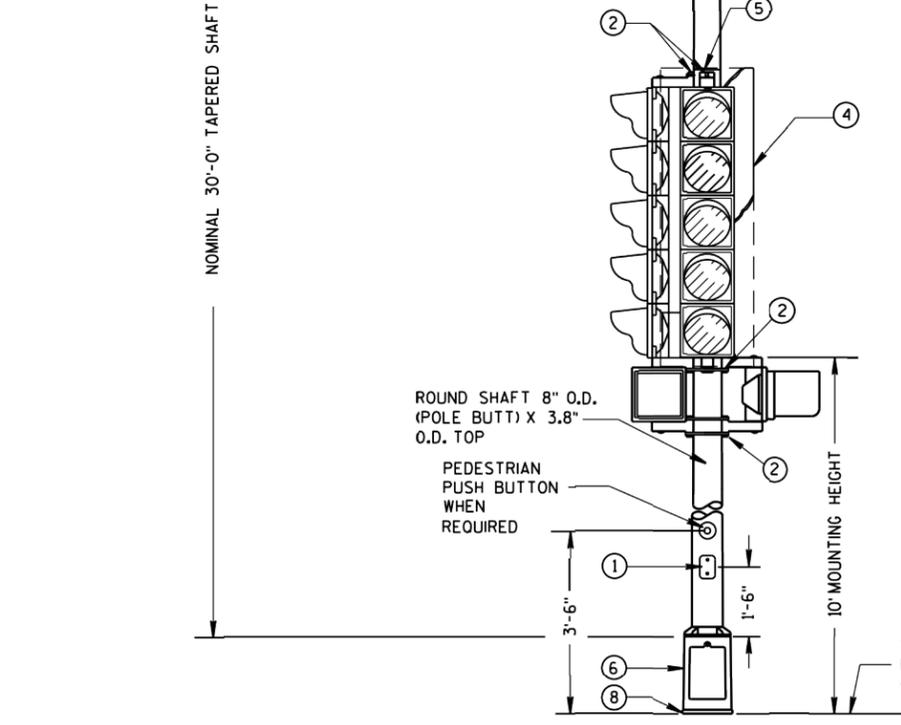
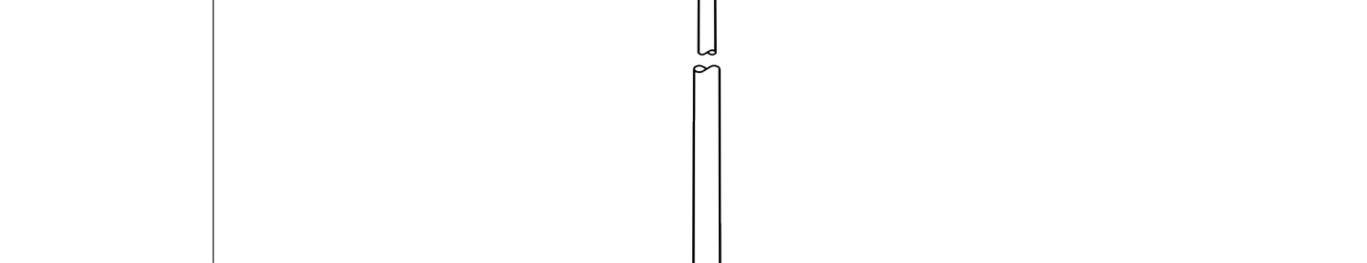
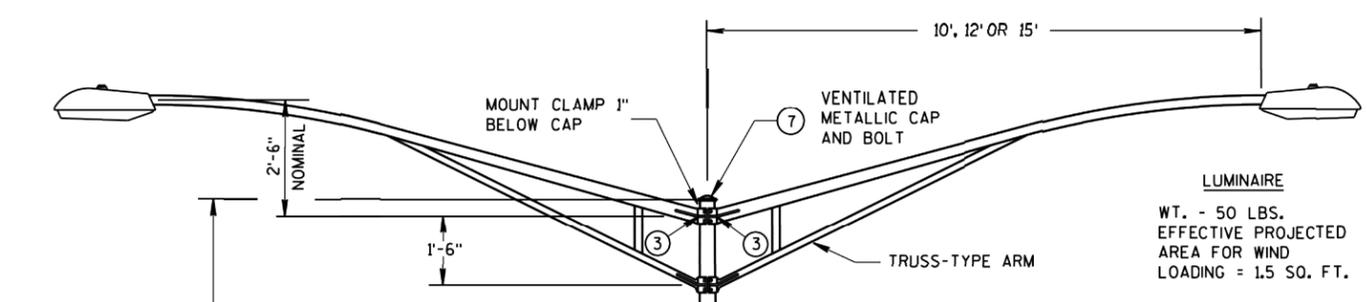
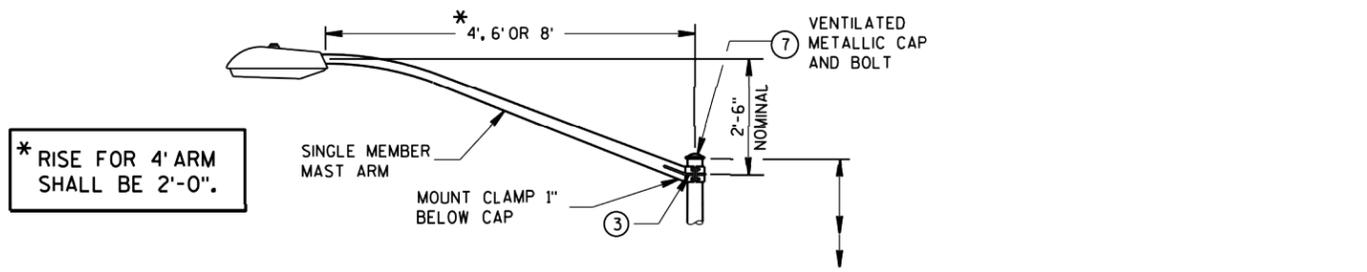
POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

SHEET NO. E-21

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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6



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

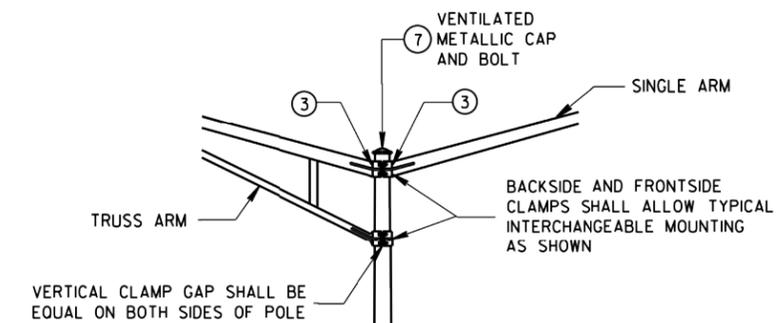
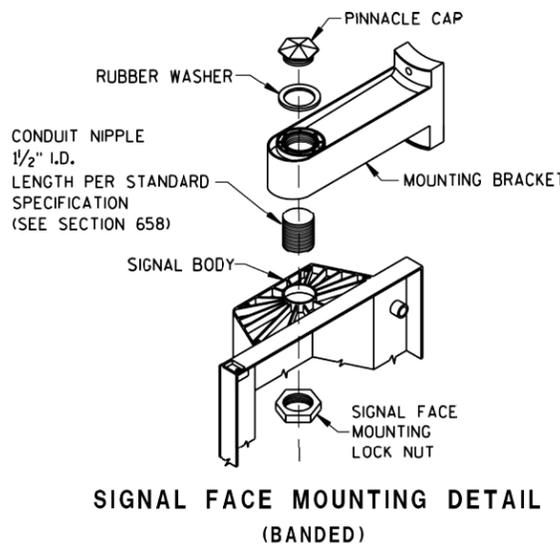
POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658).
- ③ GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑧ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.



INTERCHANGEABLE MOUNTING DETAIL

TYPE 4 POLE MOUNTING CONFIGURATION

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

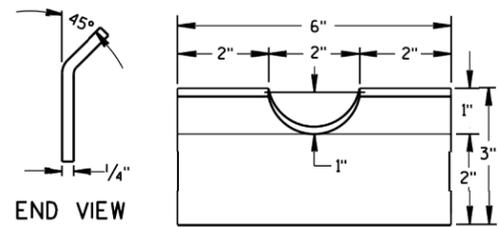
SHEET NO. E-22

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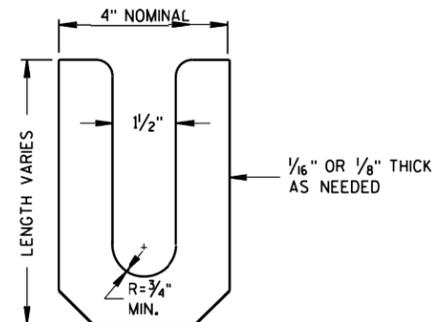
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S.D.D. 9 E 1-13c

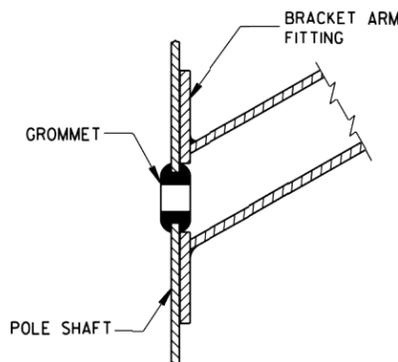
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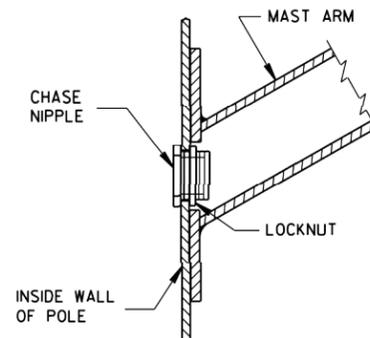
**FRONT VIEW
RECTANGULAR CLAMP SHIM**
(4 TO A SET)



LEVELING SHIM
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF
GROMMET IN POLE SHAFT**



**TYPICAL APPLICATION OF
CHASE NIPPLE IN POLE SHAFT**

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- 10 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- 11 INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- 12 BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- 13 OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)
- 14 VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

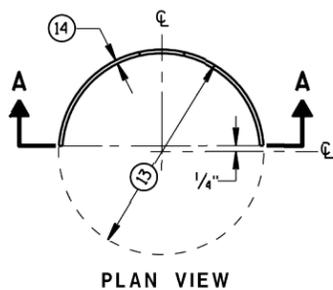
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

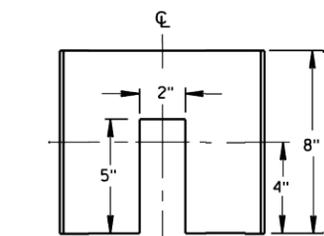
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

- 15 LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

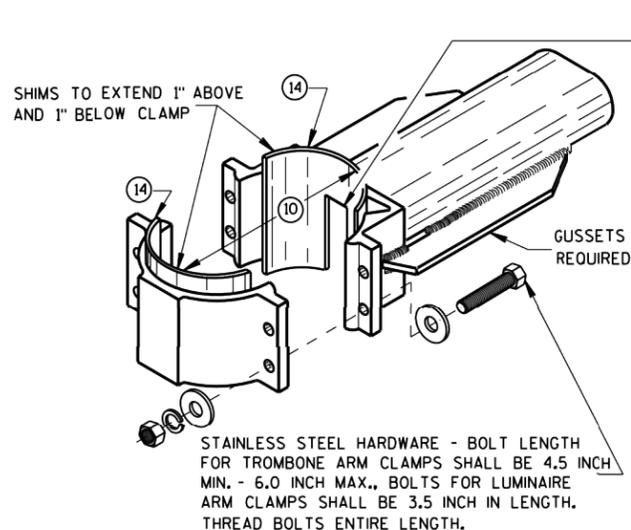
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



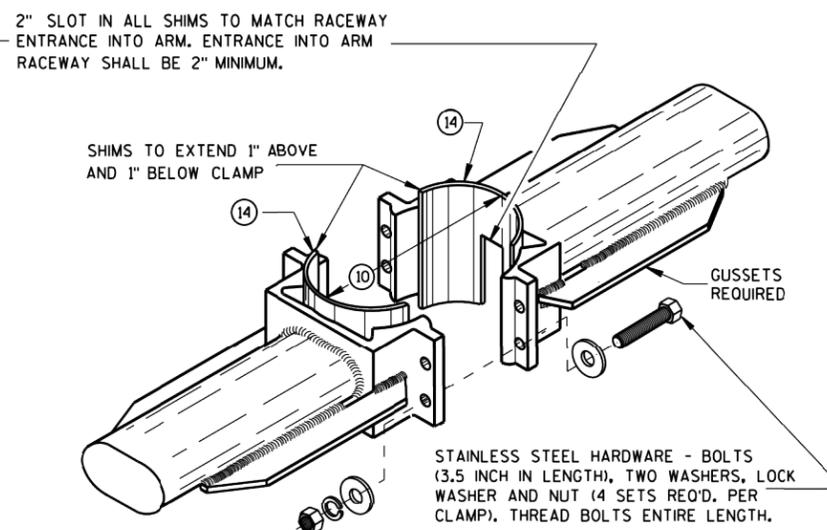
PLAN VIEW



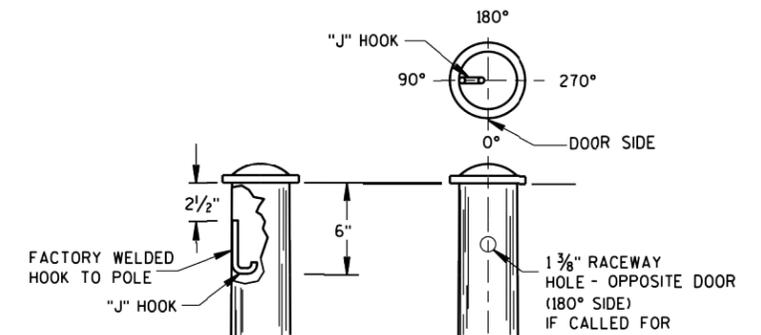
**SECTION A-A
CIRCULAR CLAMP SHIM**
(2 TO A SET)



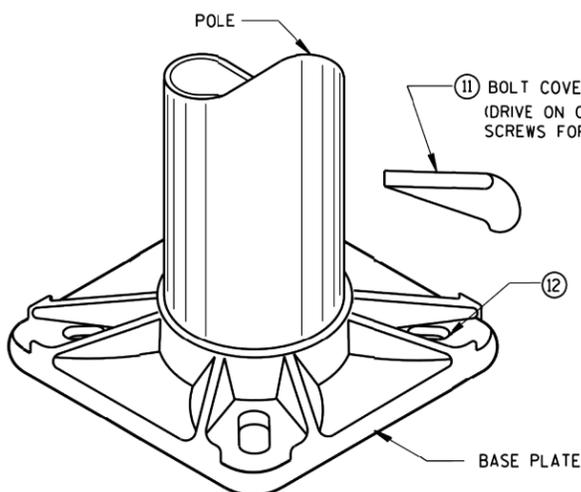
**TYPICAL TROMBONE MAST ARM AND SINGLE
LUMINAIRE MAST ARM MOUNTING CLAMP**



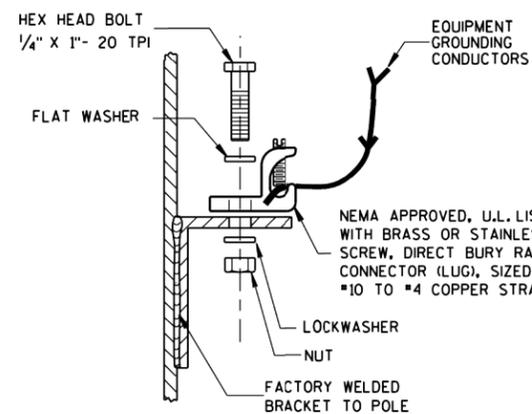
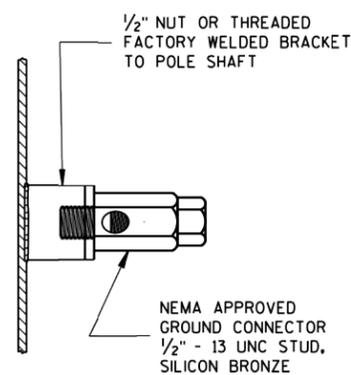
**TYPICAL LUMINAIRE MAST ARM
(DOUBLE) MOUNTING BRACKETS**



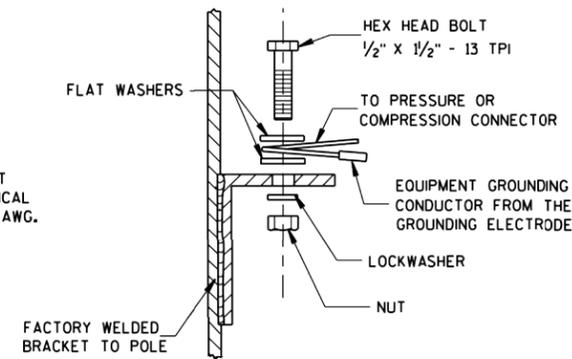
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



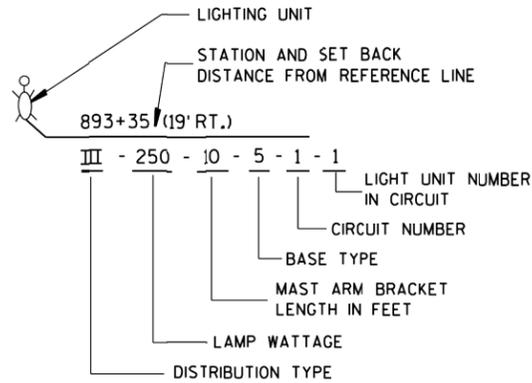
HARDWARE DETAILS FOR POLE MOUNTINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/s/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FWWA	

SHEET NO.
E-23

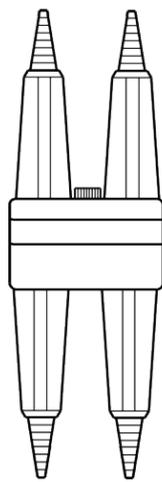
6

6

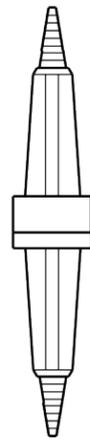
9E3: Non-Freeway Lighting Unit Pole Wiring



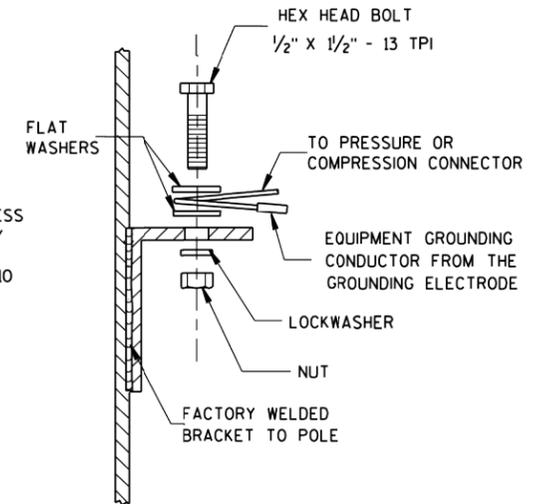
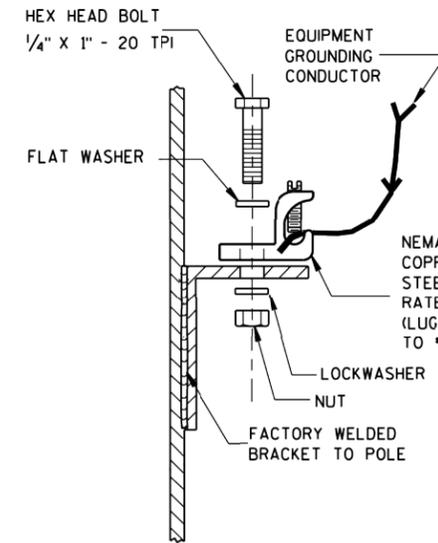
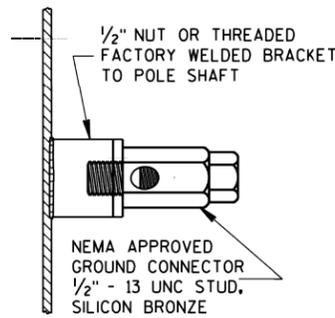
LIGHTING UNIT CODE (TYPICAL)



DETAIL "A" BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



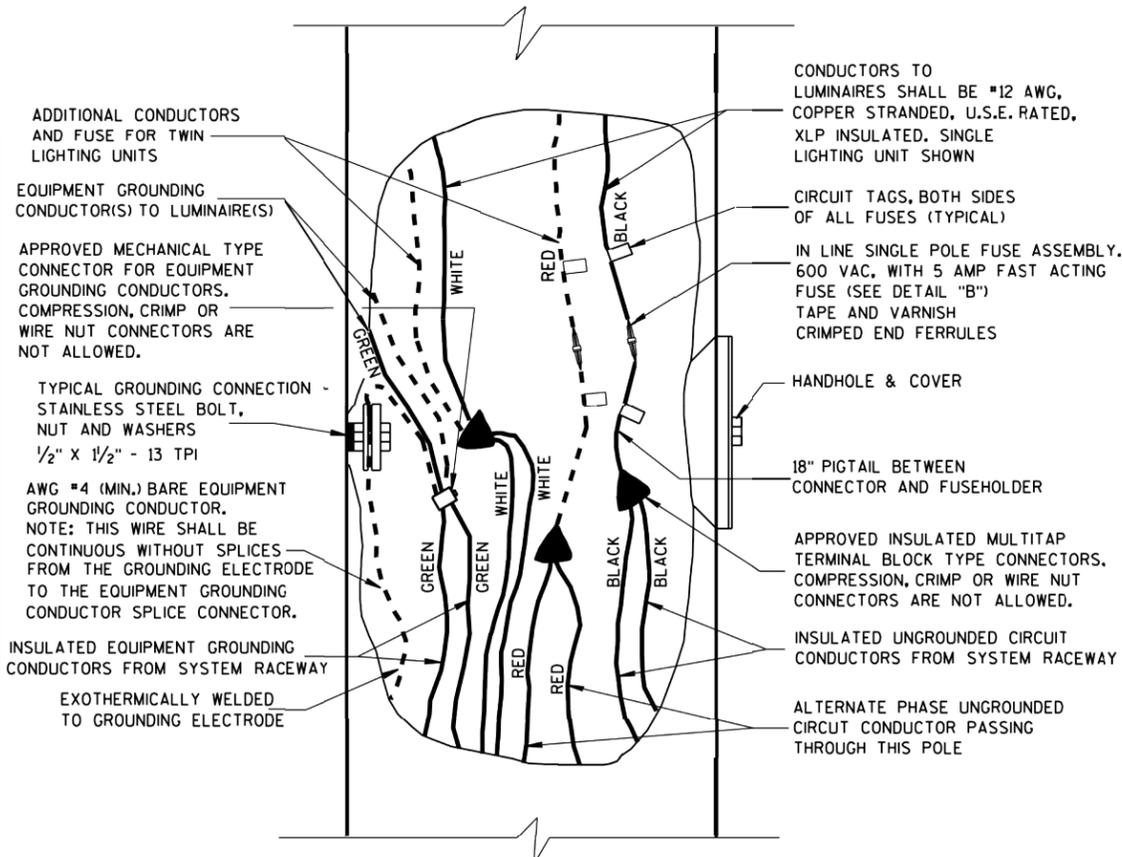
DETAIL "B" BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



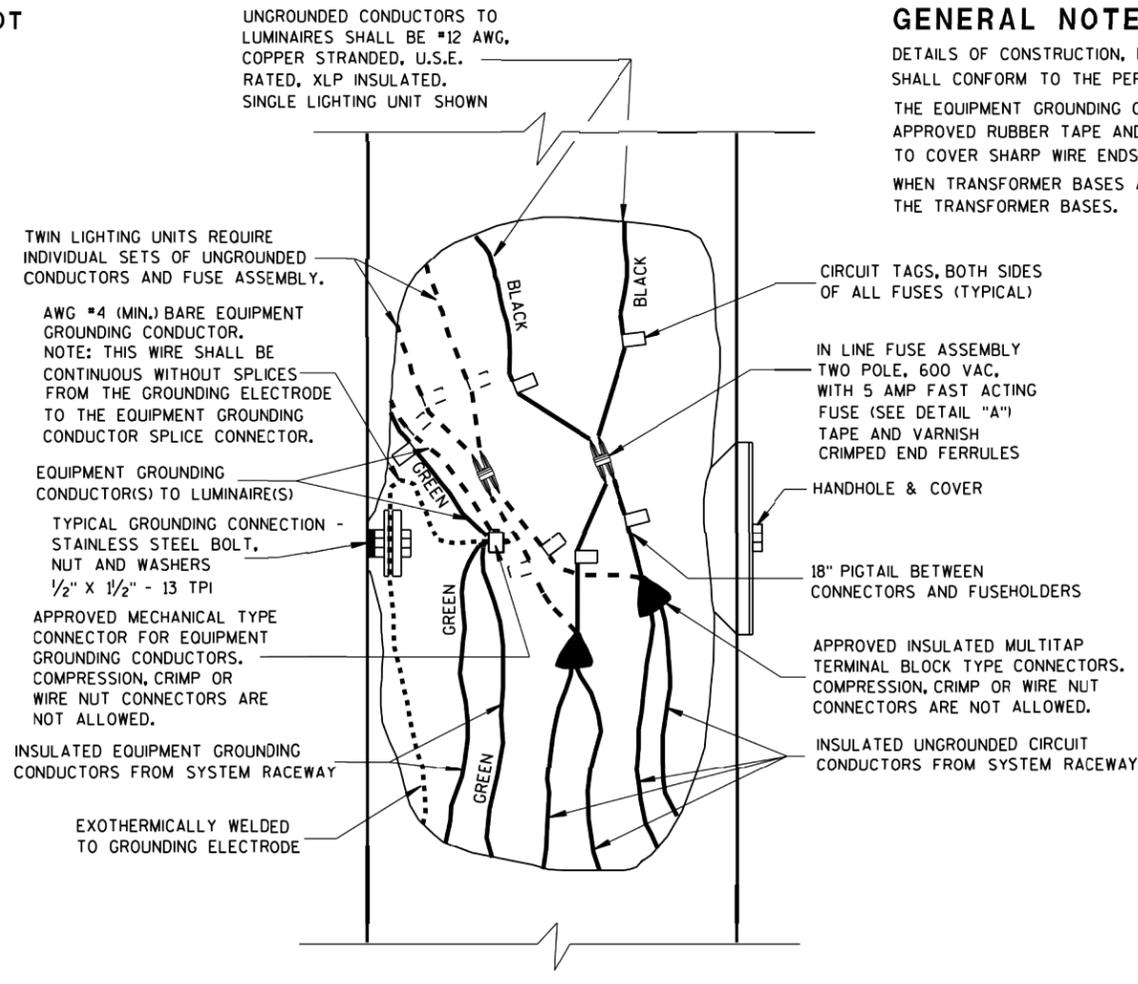
TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.
WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDING CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDING CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

6

6

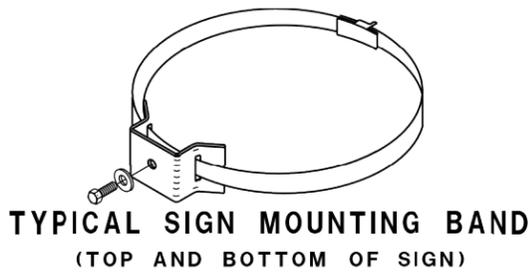
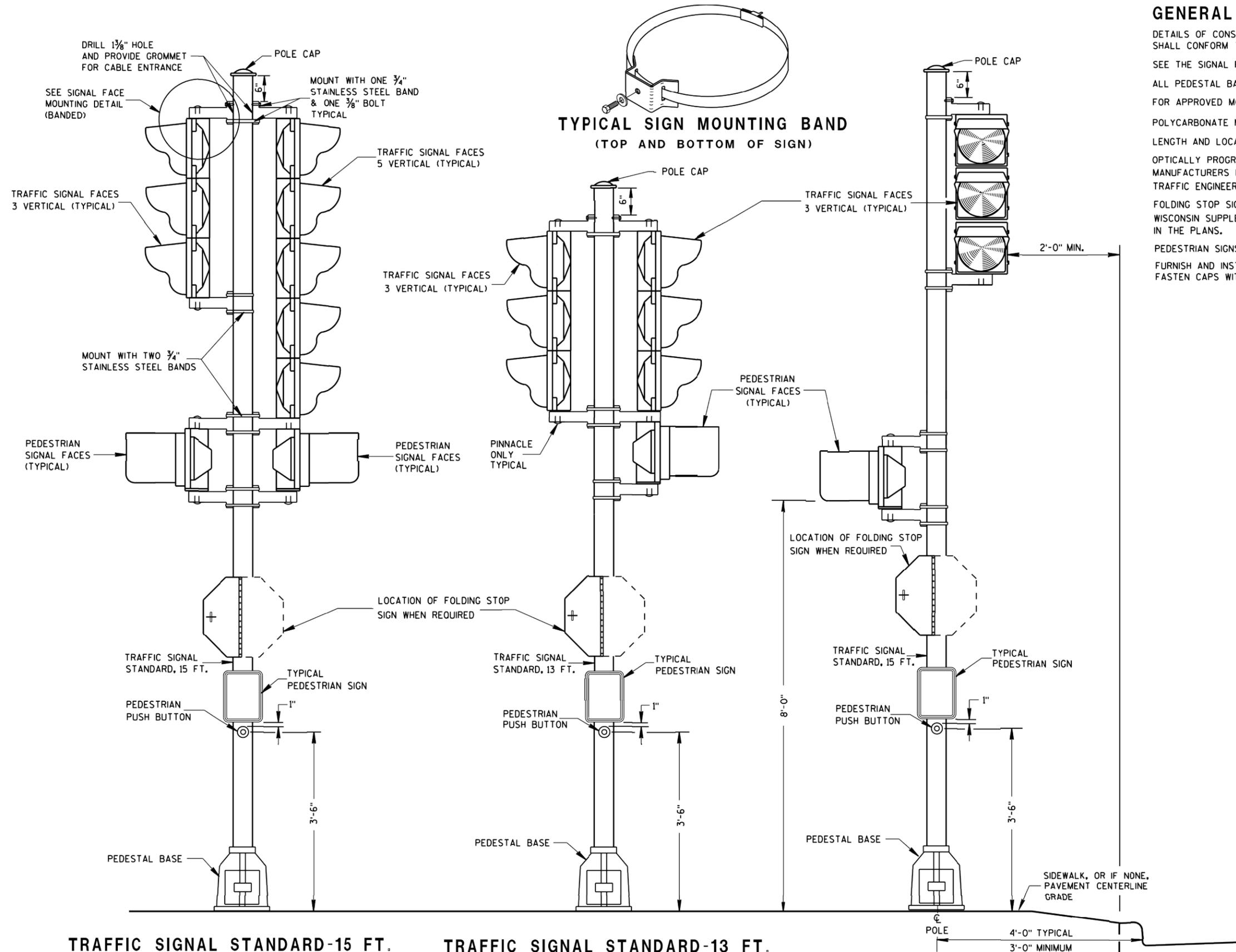
S.D.D. 9 E 3-5

S.D.D. 9 E 3-5

NON-FREEWAY LIGHTING UNIT POLE WIRING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FWWA	

SHEET NO. E-24

9E6: Traffic Signal Standard Poly Bracket Mountings (Typical) 13 ft. or 15 ft.



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLYCARBONATE MOUNTING BRACKETS SHALL BE USED.

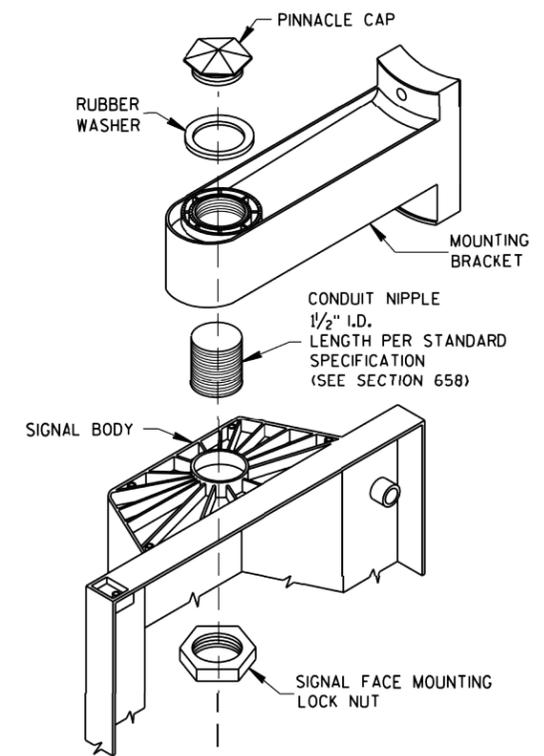
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(BANDED)

TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2/28/2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	

SHEET NO.
E-25

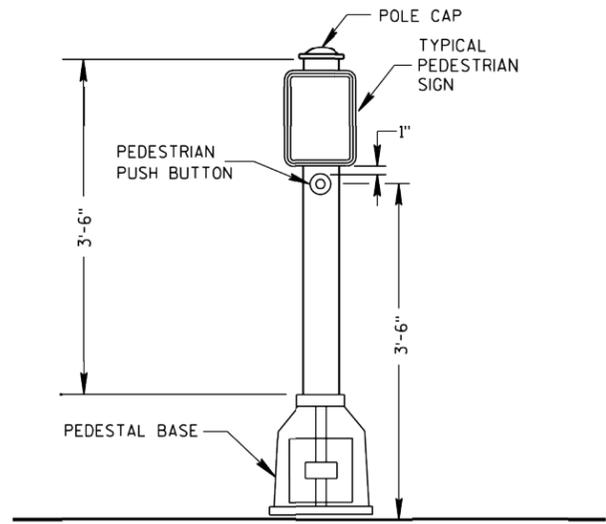
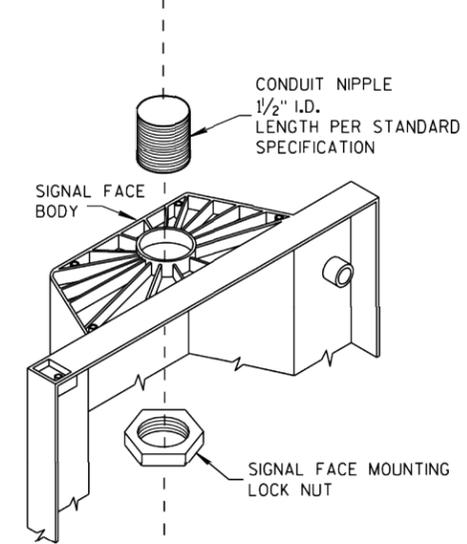
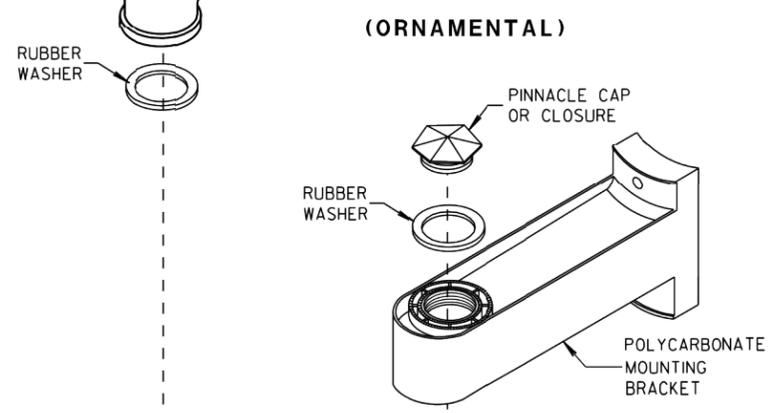
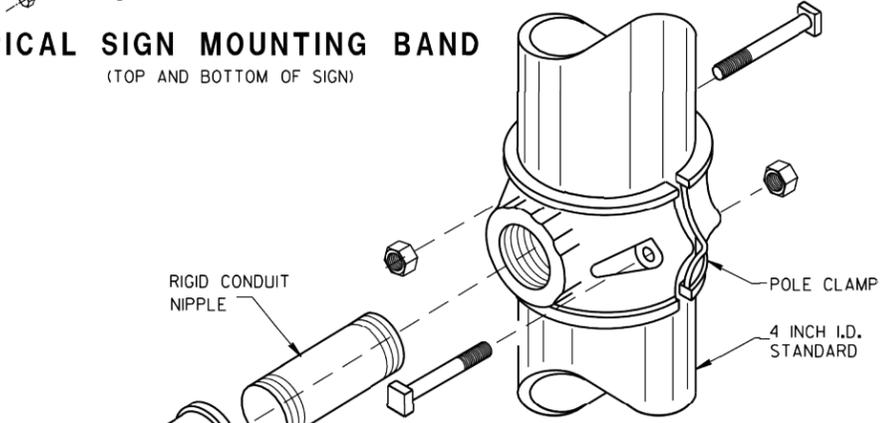
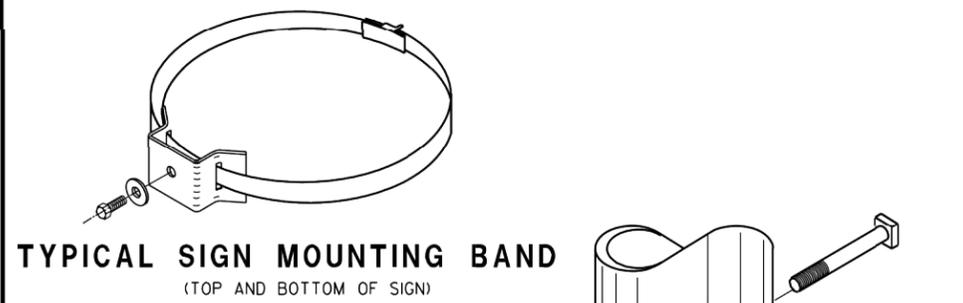
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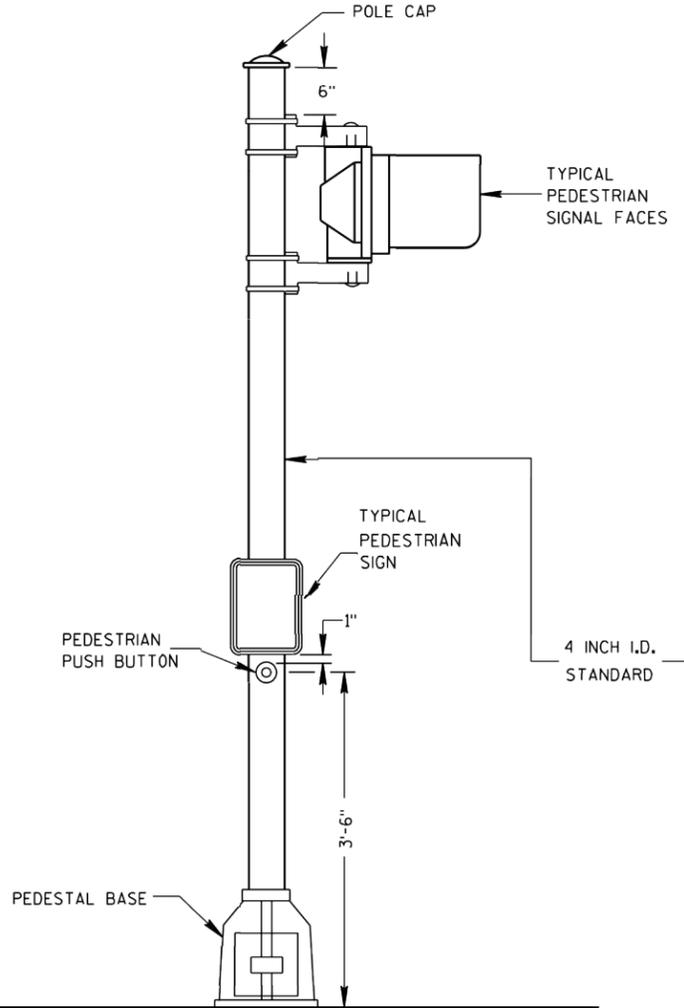
S.D.D. 9 E 6-5

S.D.D. 9 E 6-5

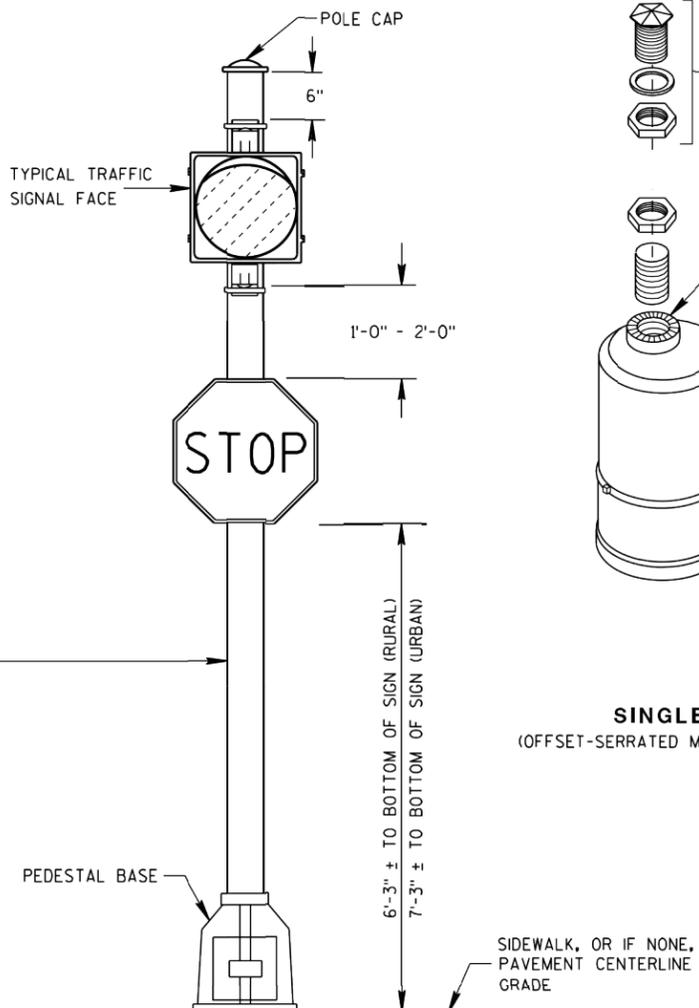
9E7: Traffic Signal Standard Pedestrian and Flasher Typical Mounting Details



**PEDESTRIAN PUSH BUTTON
TYPICAL MOUNTING**



**PEDESTRIAN FACE STANDARD-10 FT.
(WALK-DON'T WALK)**



**STANDARD FLASHER.
10 FOOT, 13 FOOT OR 15 FOOT AS REQUIRED**

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIFICATIONS.

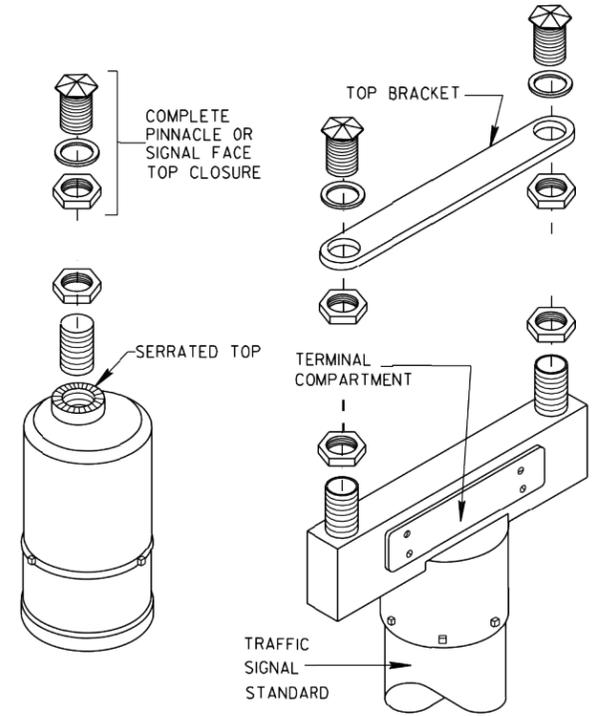
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

LENGTH OF TRAFFIC STANDARDS SHALL BE AS SHOWN ON THE PLANS.

MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



**SINGLE (OFFSET-SERRATED MOUNTING)
DOUBLE (SERRATED MOUNTING)
SLIPFITTERS**

TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/11/10 DATE	/s/ John Corbin STATE ELECTRICAL ENGINEER FOR HWYS
FHWA	

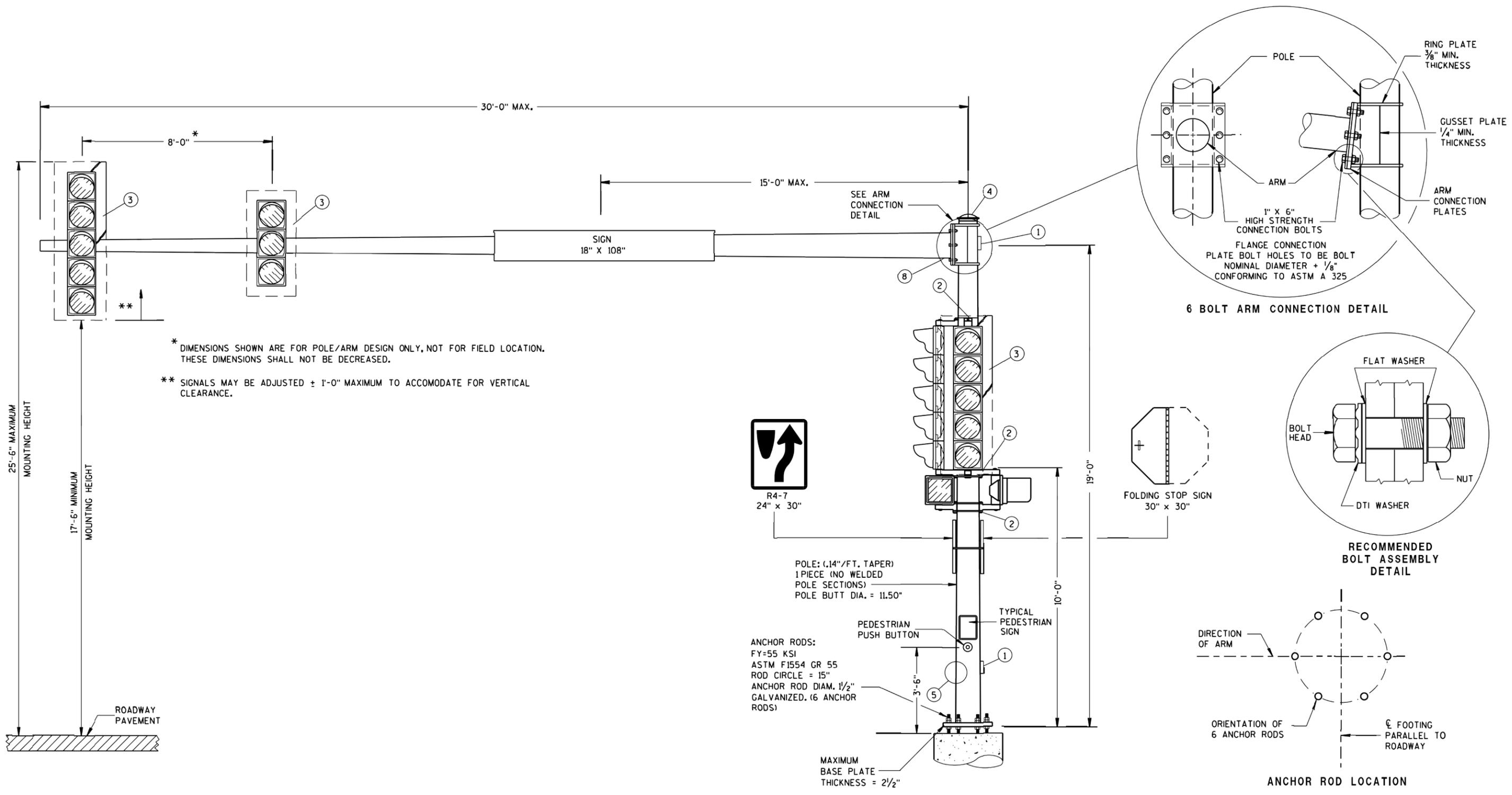
SHEET NO.
E-26

6

6

S.D.D. 9 E 7-5

S.D.D. 9 E 7-5



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.

** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMMODATE FOR VERTICAL CLEARANCE.

(MAXIMUM LOAD)

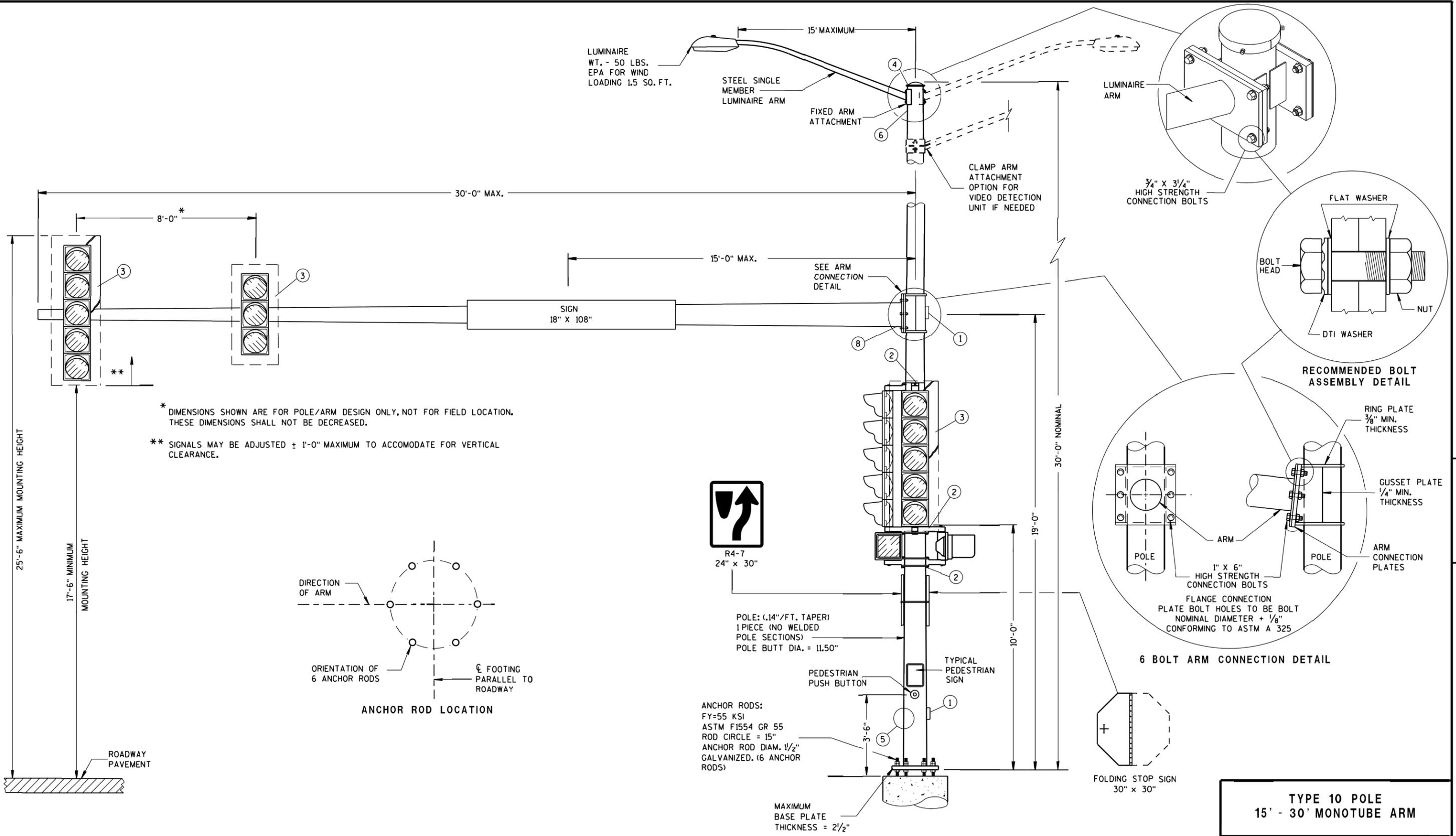
TYPE 9 POLE 15' - 30' MONOTUBE ARM

TYPE 9 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May, 2016 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
FWWA	

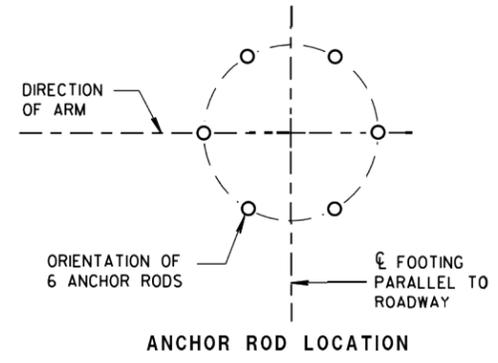
SHEET NO.
E-27

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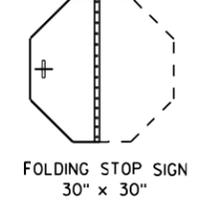
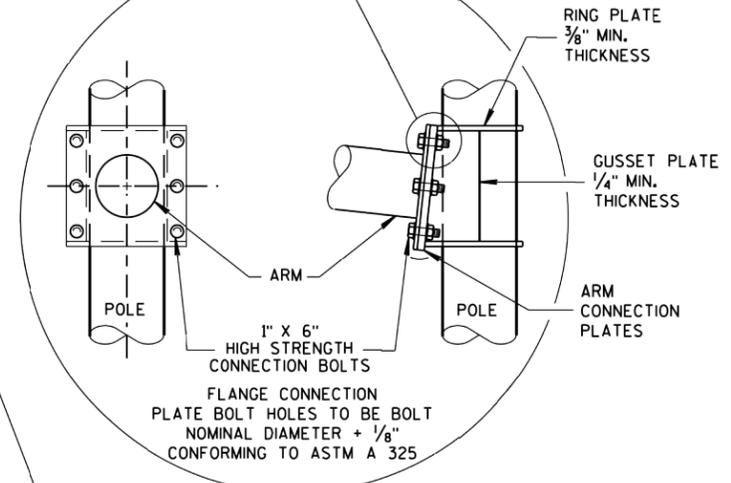
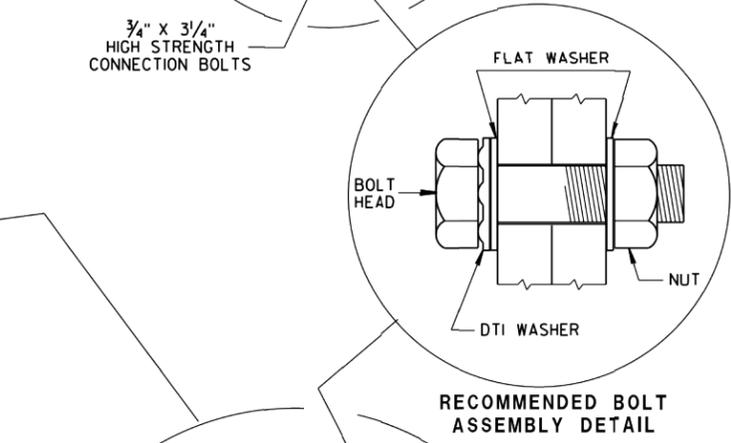
6



* DIMENSIONS SHOWN ARE FOR POLE/ARM DESIGN ONLY, NOT FOR FIELD LOCATION. THESE DIMENSIONS SHALL NOT BE DECREASED.
 ** SIGNALS MAY BE ADJUSTED ± 1'-0" MAXIMUM TO ACCOMODATE FOR VERTICAL CLEARANCE.



POLE: (.14"/FT. TAPER)
 1 PIECE (NO WELDED POLE SECTIONS)
 POLE BUTT DIA. = 11.50"
 ANCHOR RODS:
 FY=55 KSI
 ASTM F1554 GR 55
 ROD CIRCLE = 15"
 ANCHOR ROD DIAM. 1/2"
 GALVANIZED. (6 ANCHOR RODS)



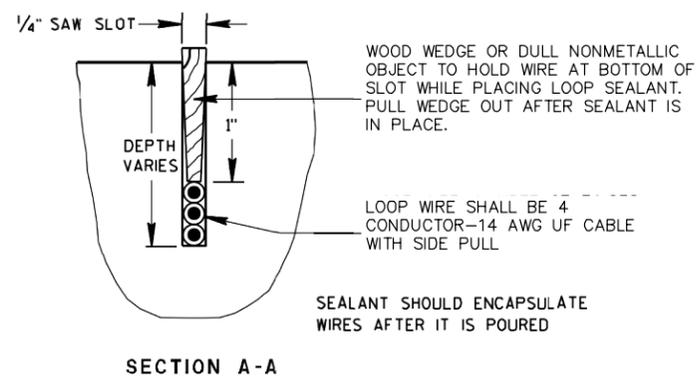
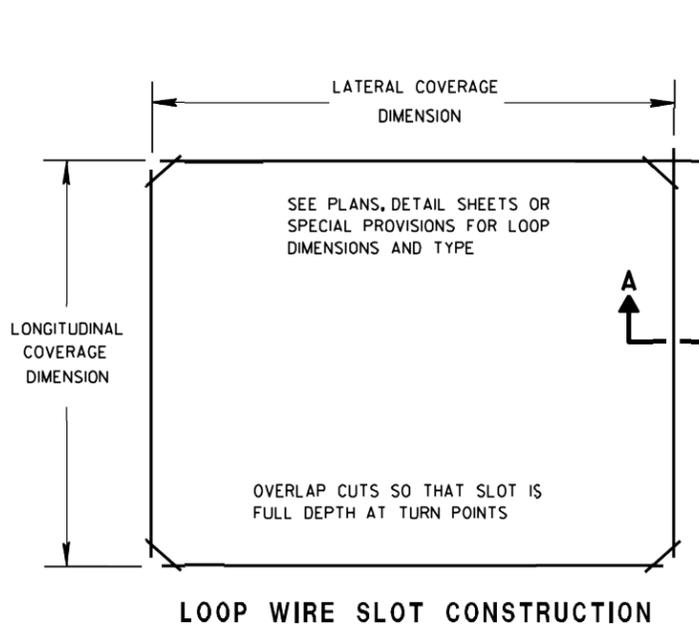
(MAXIMUM LOAD)
**TYPE 10 POLE
 15' - 30' MONOTUBE ARM**

TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE E-28	/s/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER

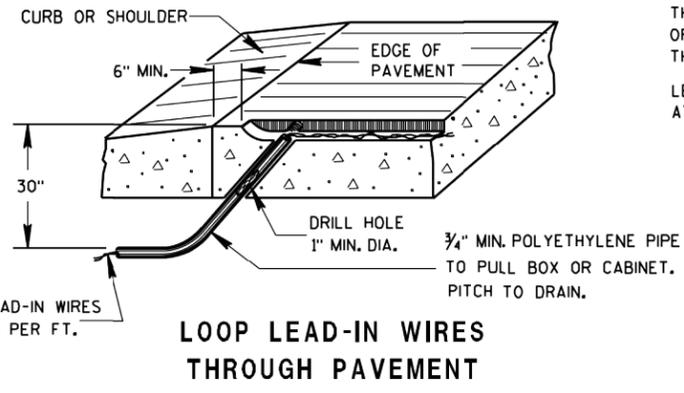
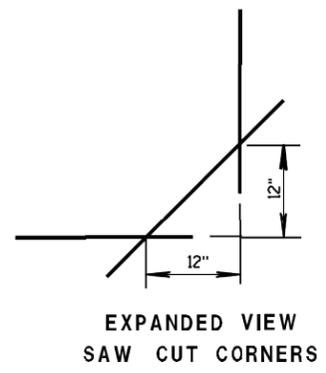
S.D.D. 9 E 8-8b

S.D.D. 9 E 8-8b

9F1: Details for the Installation of Temporary Traffic Signal Loop Detector Wires in any Existing Pavement



LOOP AND LEAD-IN WIRES IN PAVEMENT



GENERAL NOTES

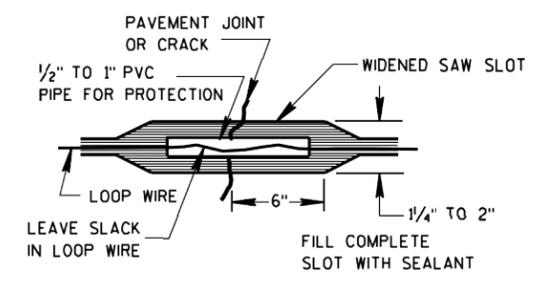
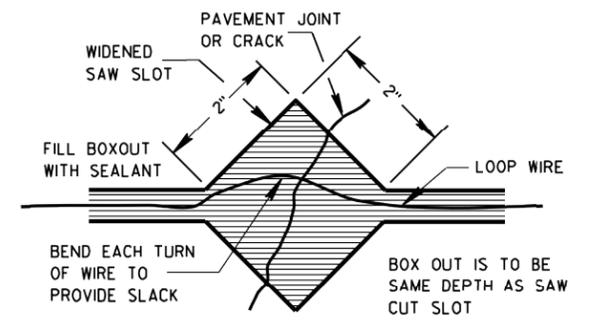
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE SLOTS IN THE PAVEMENT SHALL BE CUT TO DIMENSION WITH A SAW. THE SLOTS SHALL BE CLEANED FREE OF DIRT, DUST, MOISTURE AND DEBRIS PRIOR TO INSTALLATION OF THE WIRE.

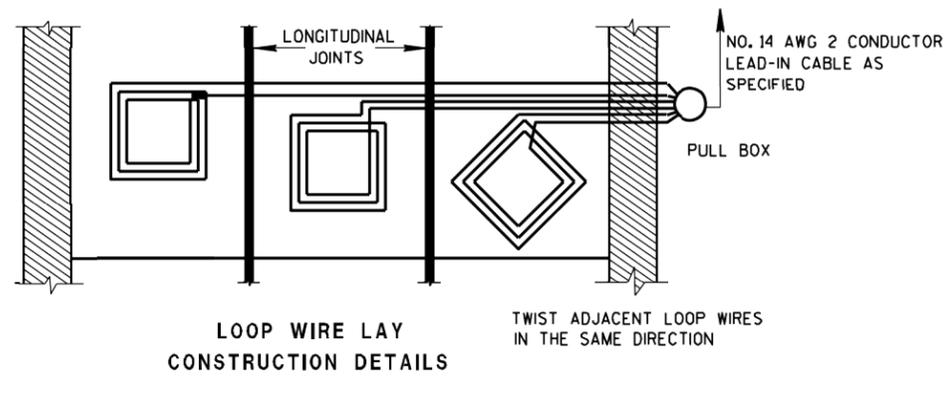
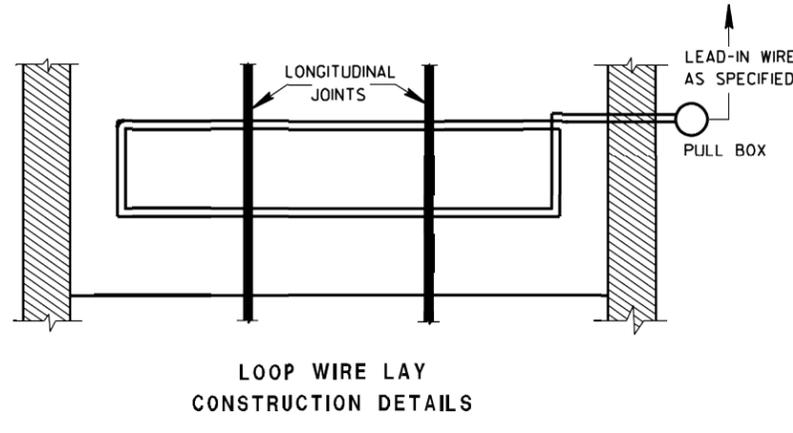
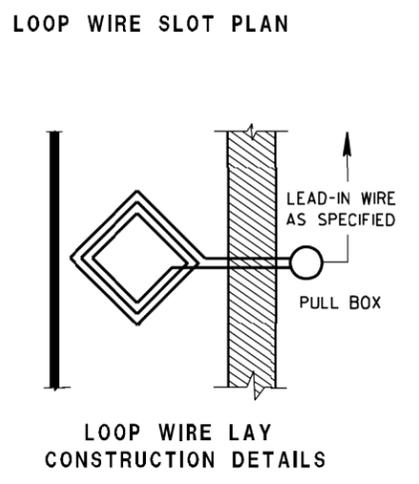
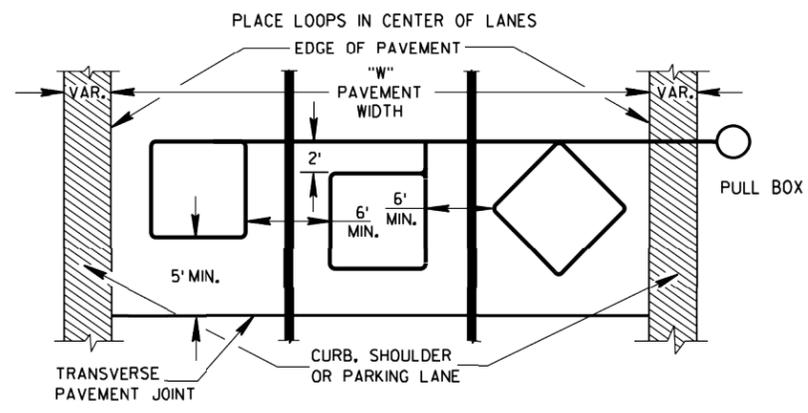
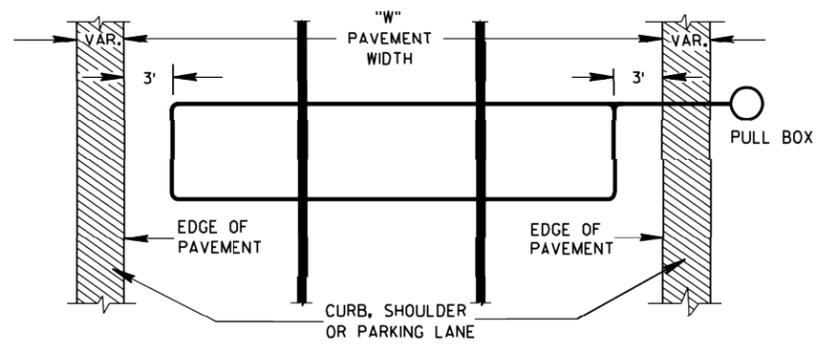
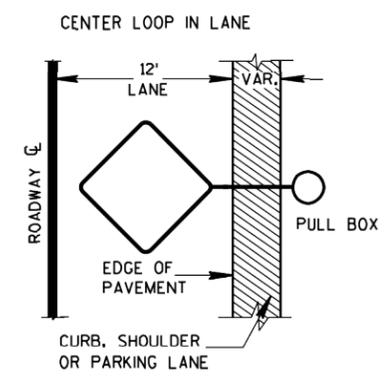
FILL SLOT WITH "BASF MASTERSEAL SL 180" LOOP SEALANT PER MANUFACTURER'S RECOMMENDATIONS.

THE TWO SINGLE CONDUCTOR LOOP WIRES SHALL BE TWISTED TOGETHER AT A RATE OF THREE TWISTS PER FOOT FROM THE PAVEMENT EDGE TO THE SPLICE CONNECTION WITH THE LOOP LEAD-IN CABLE.

LEAD-IN CABLES AND LOOP LEAD-IN WIRES SHALL BOTH BE CUT TO 6 FEET IN LENGTH AT THE SPlicing PULL BOX.



LOOP WIRE INSTALLATION ACROSS PAVEMENT JOINT OR CRACK



(MODIFIED)

DETAILS FOR THE INSTALLATION OF TEMPORARY TRAFFIC SIGNAL LOOP DETECTOR WIRES IN ANY EXISTING PAVEMENT		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED	DATE	/S/ Ahmet Demirbilek
June, 2015		STATE ELECTRICAL ENGINEER
FHWA		

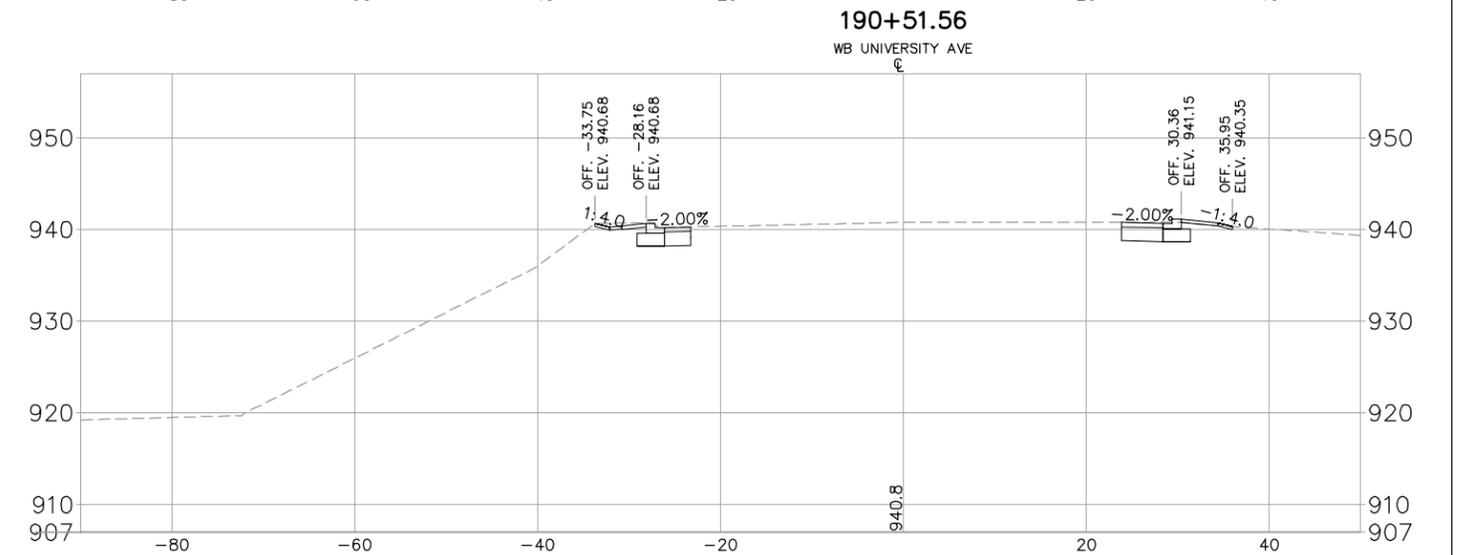
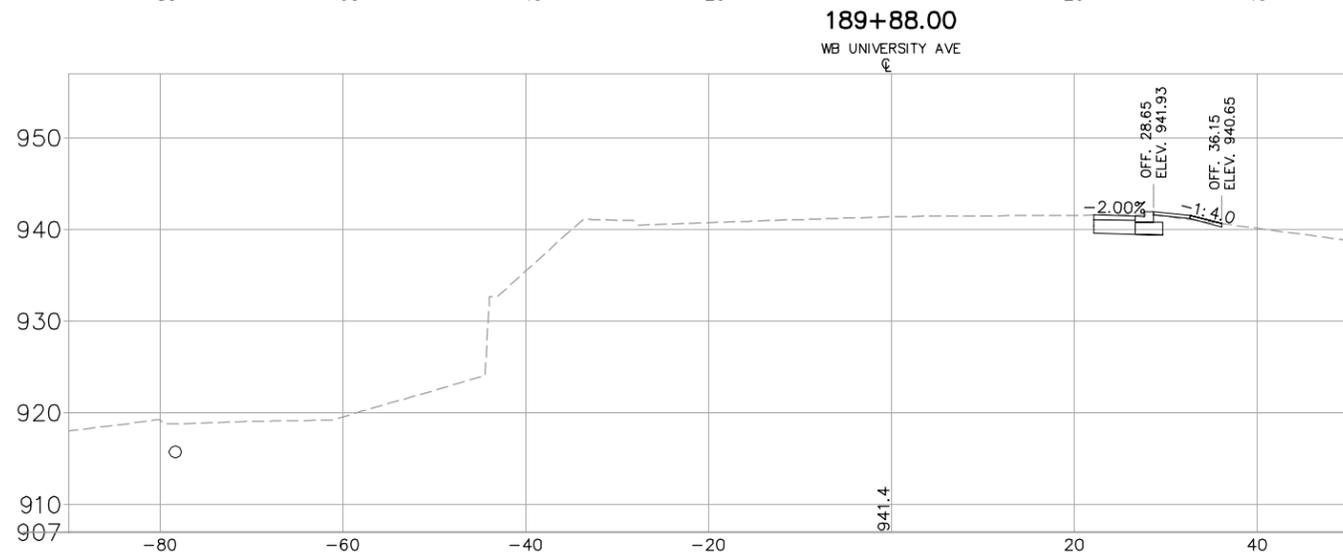
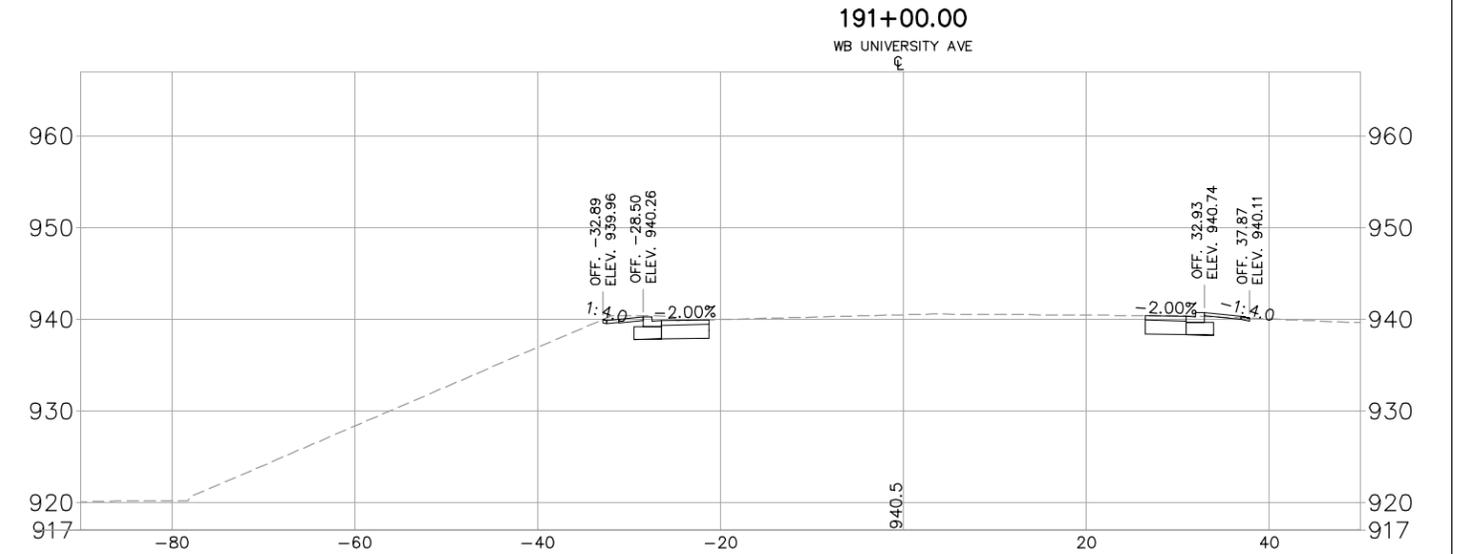
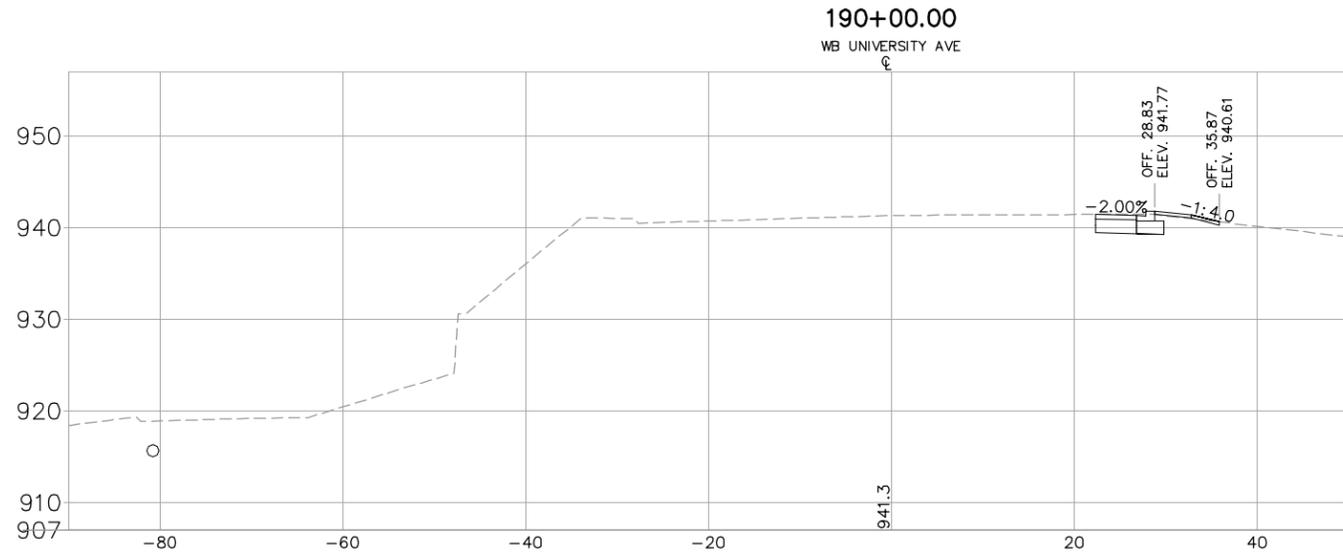
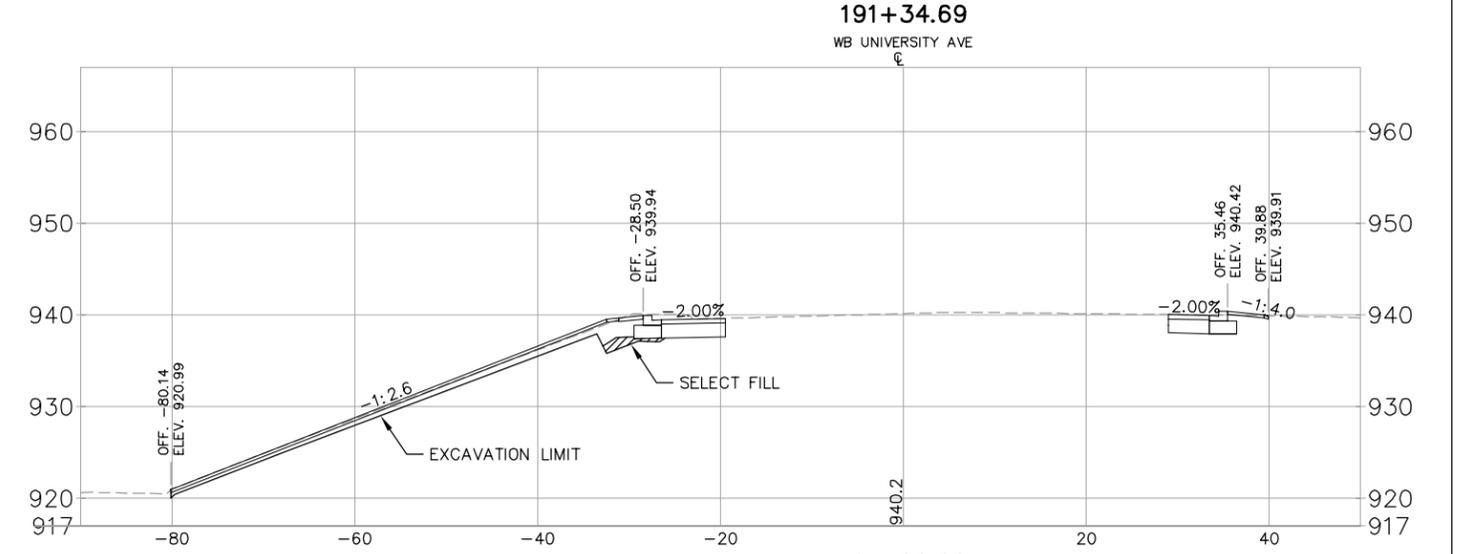
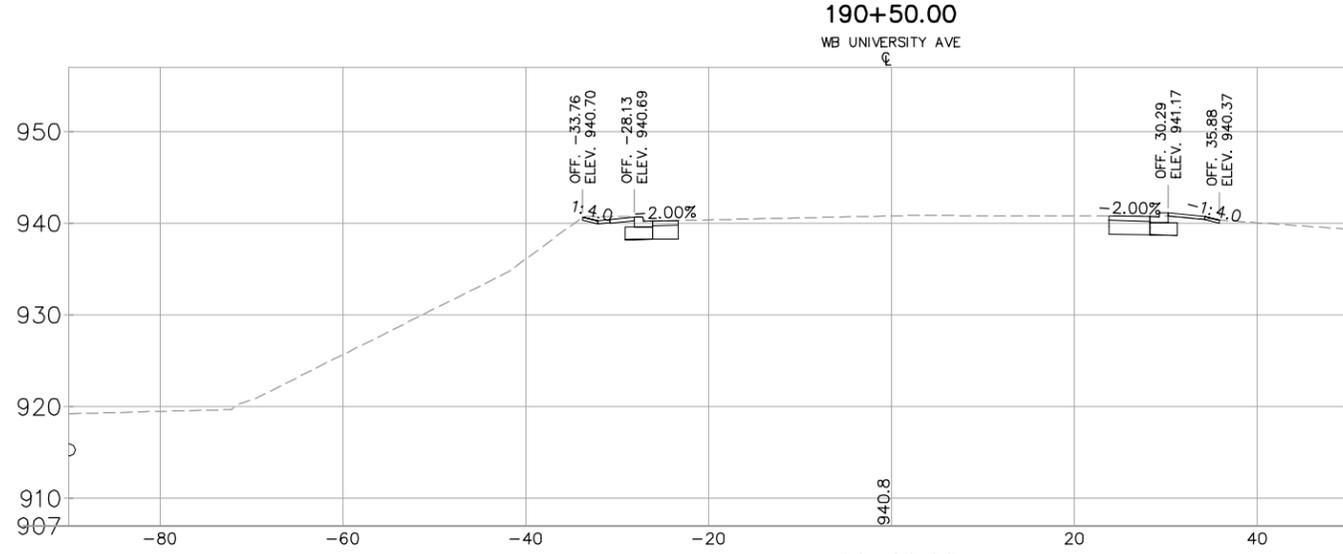
SHEET NO. E-29

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6

S.D.D. 9 F 1-4

S.D.D. 9 F 1-4

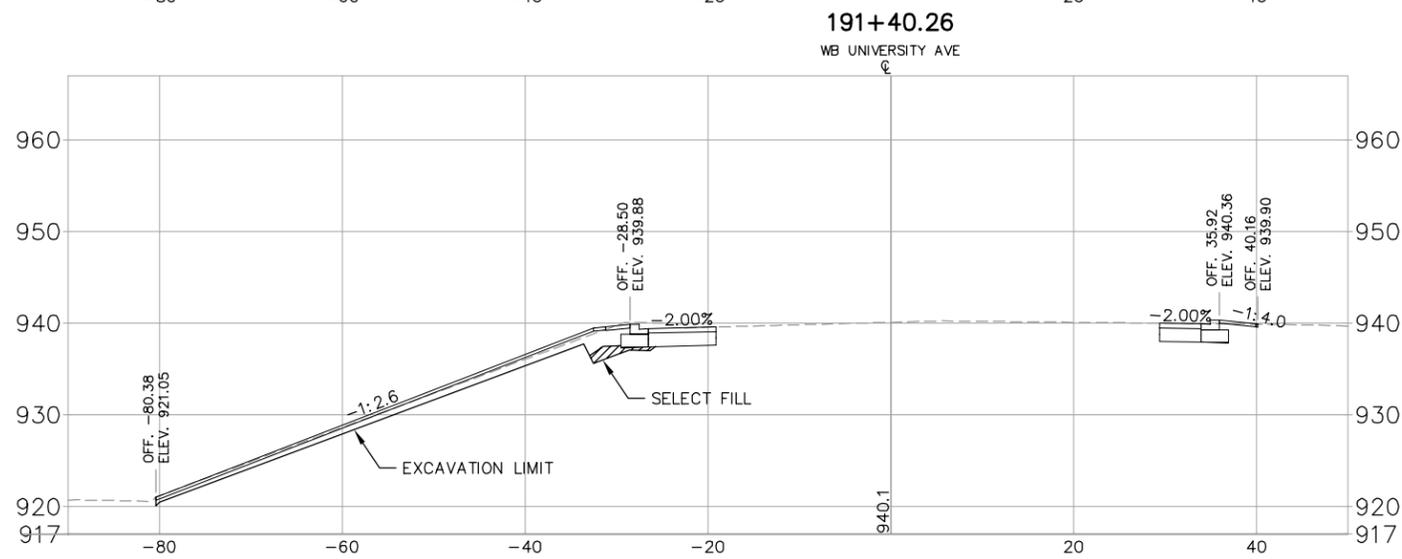
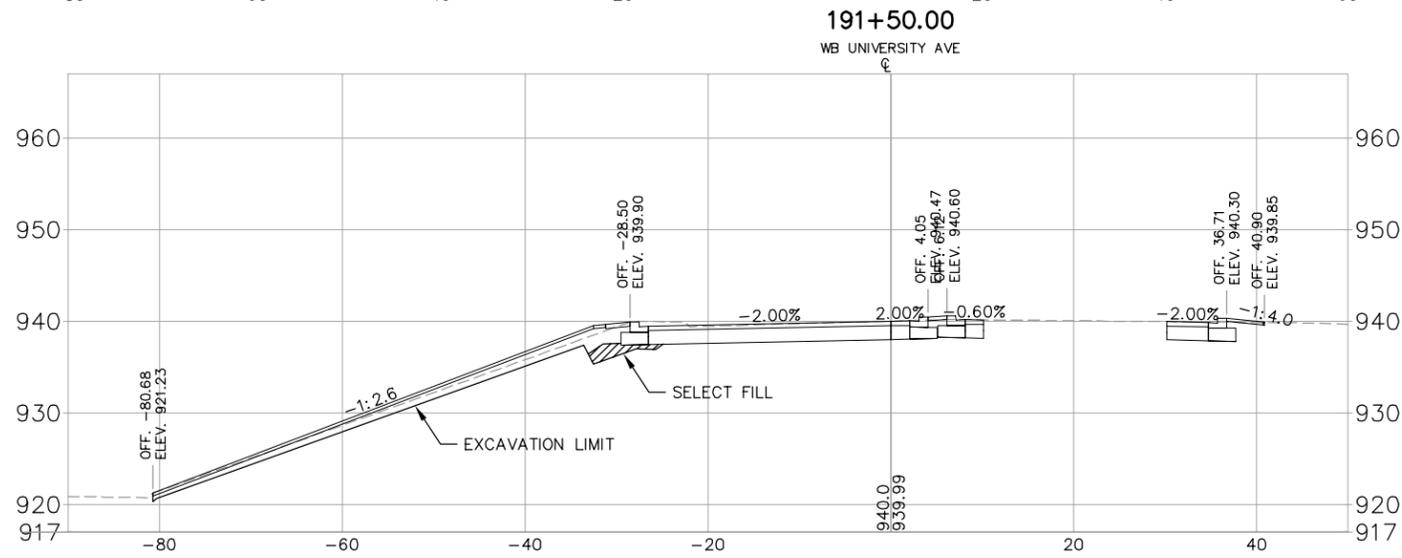
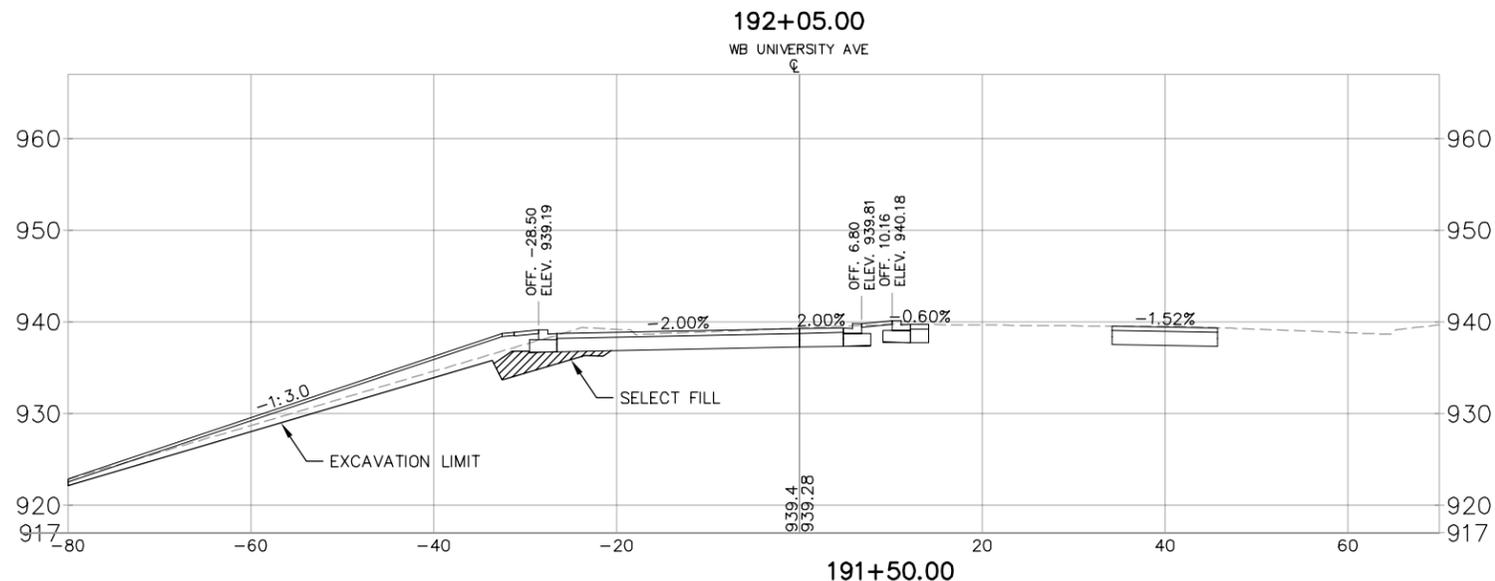


PLOT SCALE:

PLOT NAME:

REV. DATE:

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

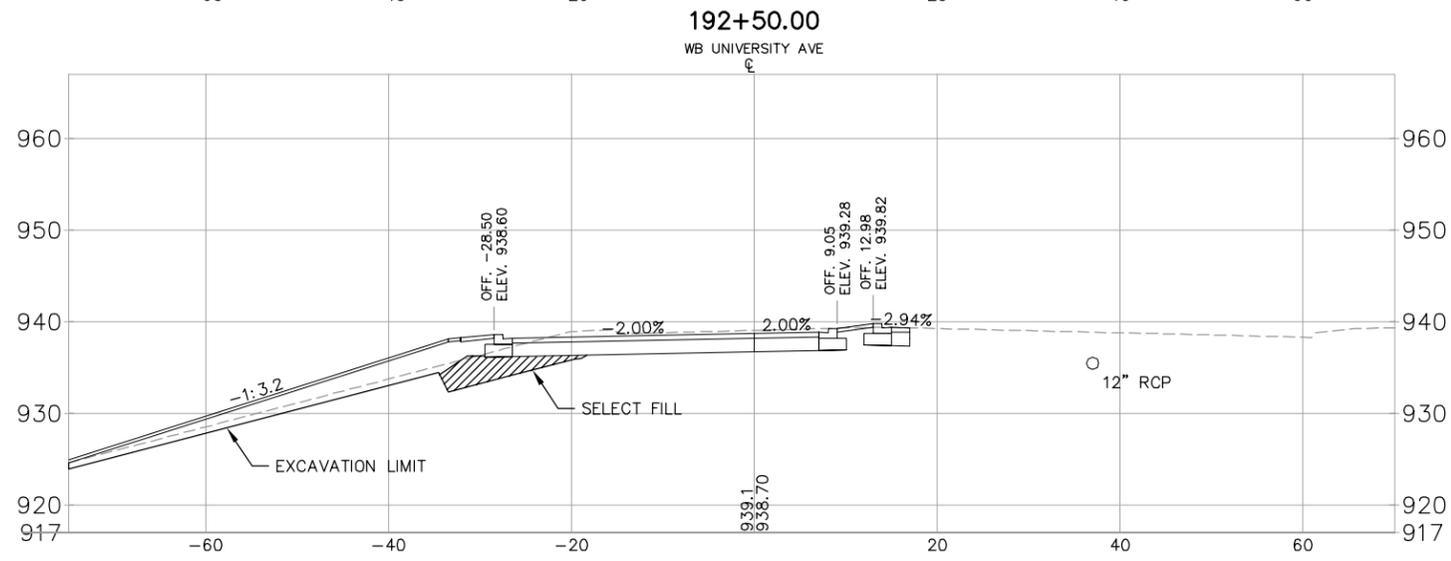
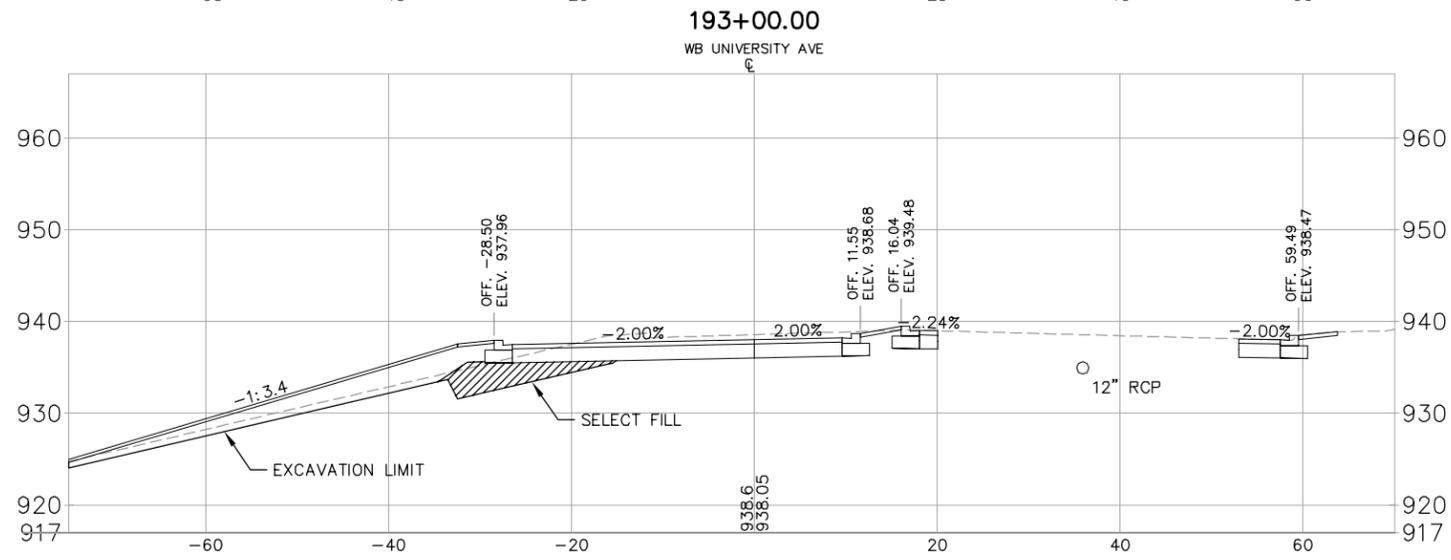
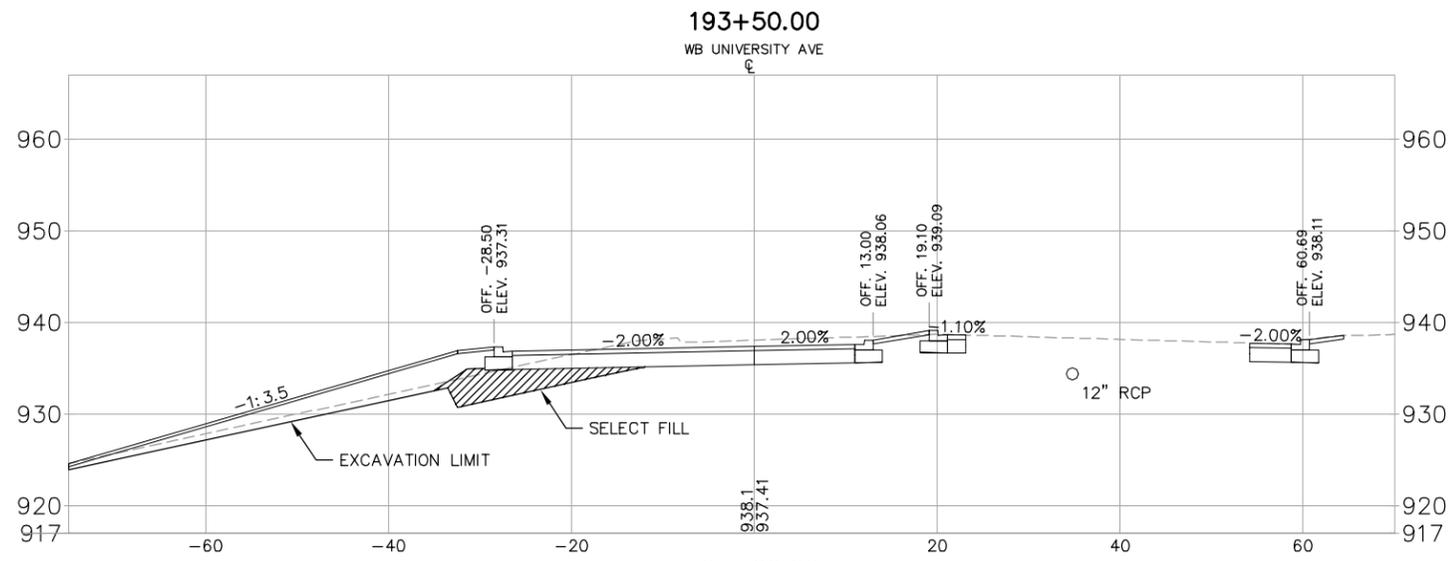


PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

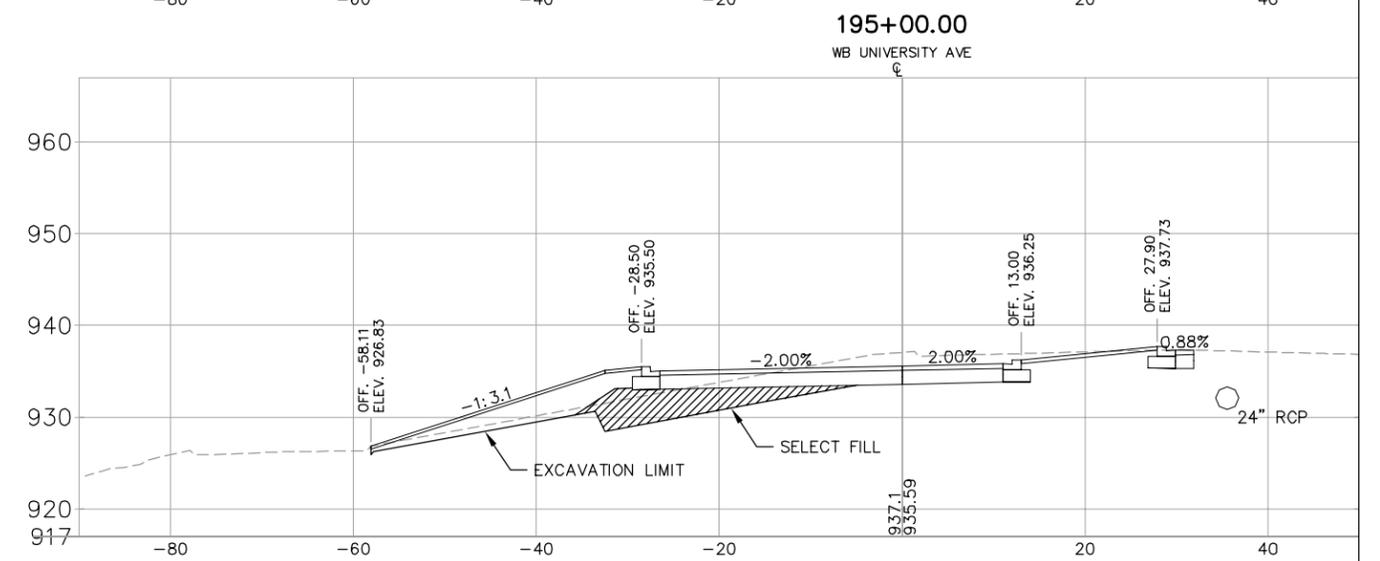
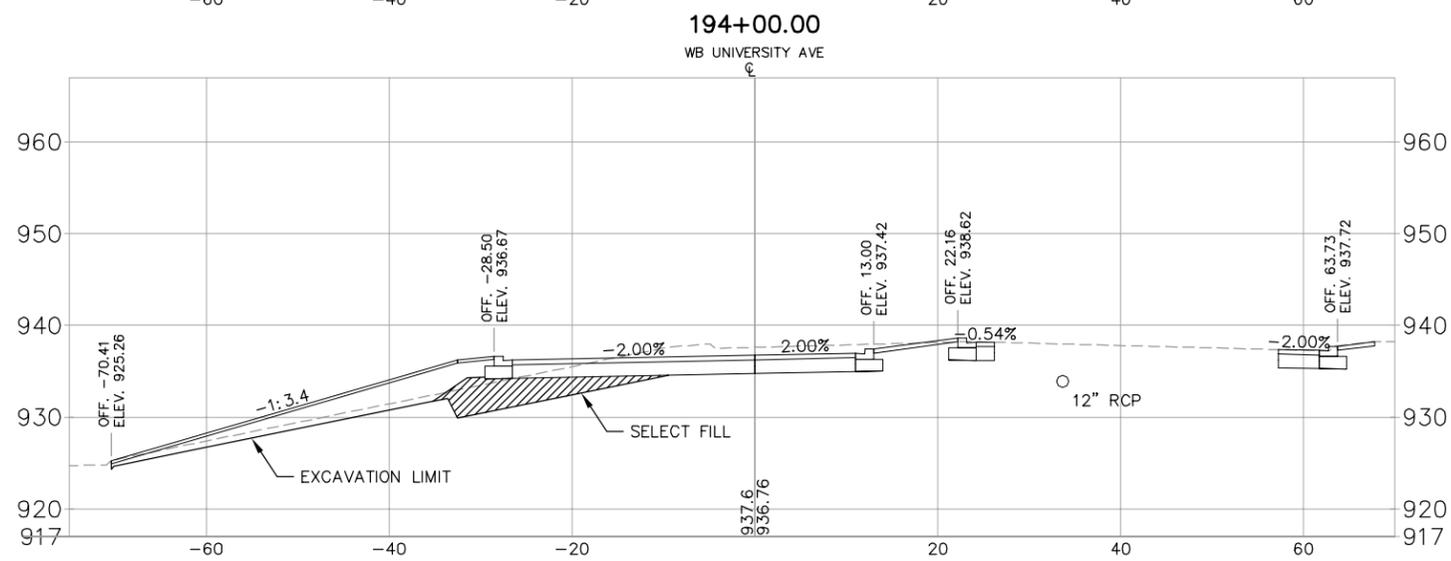
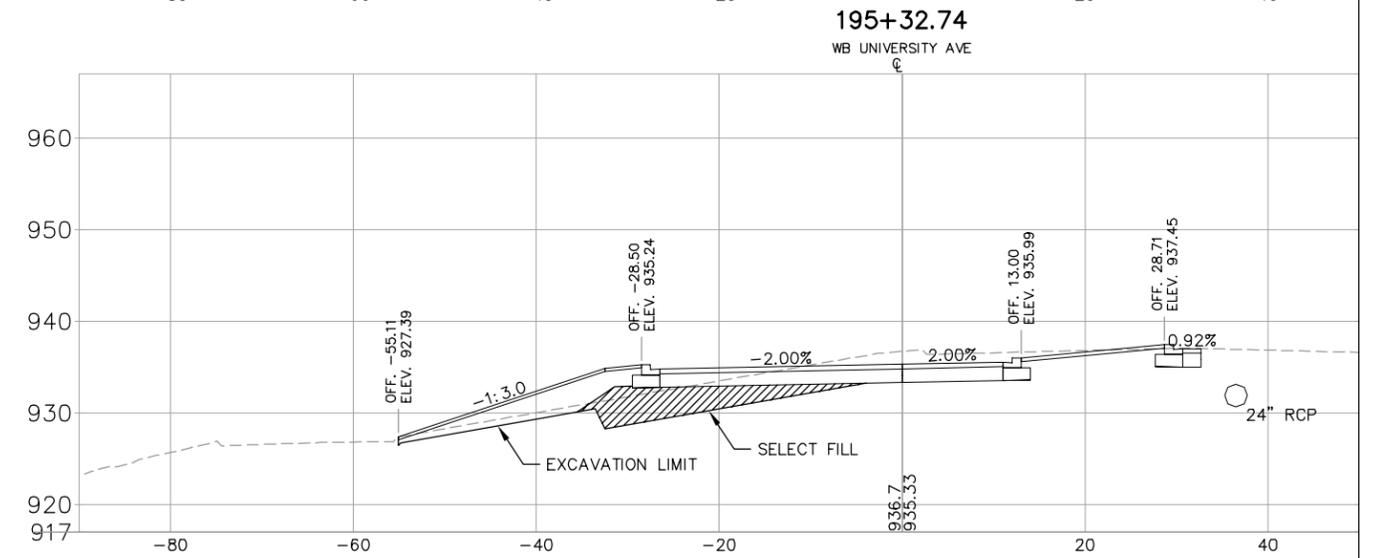
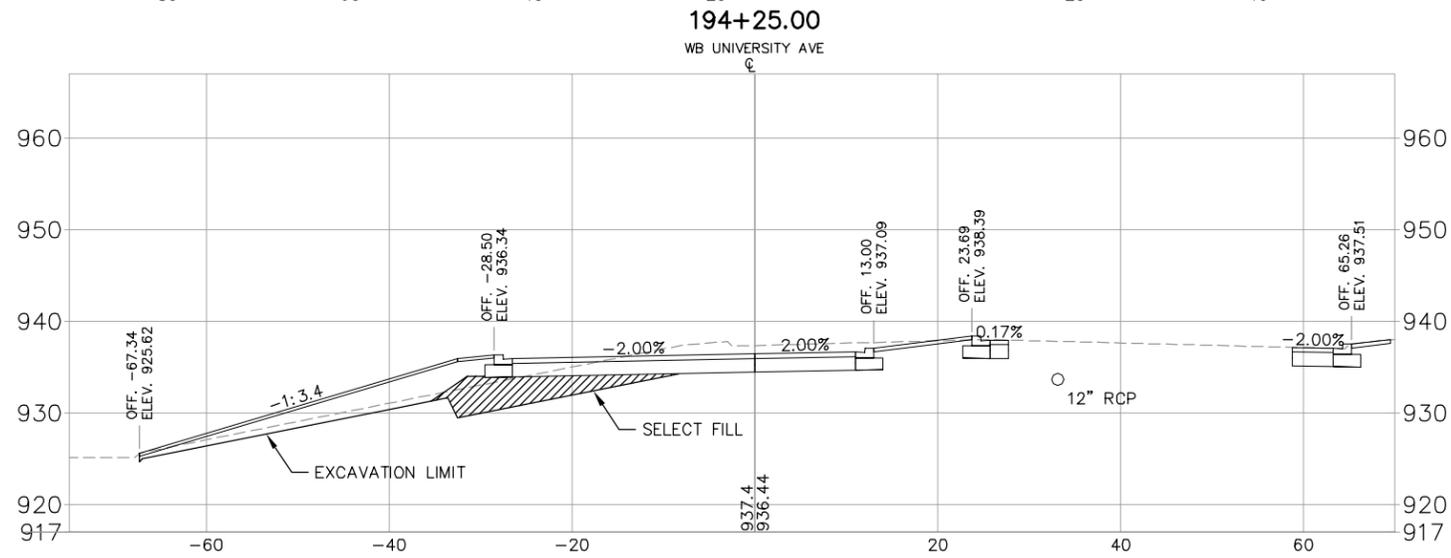
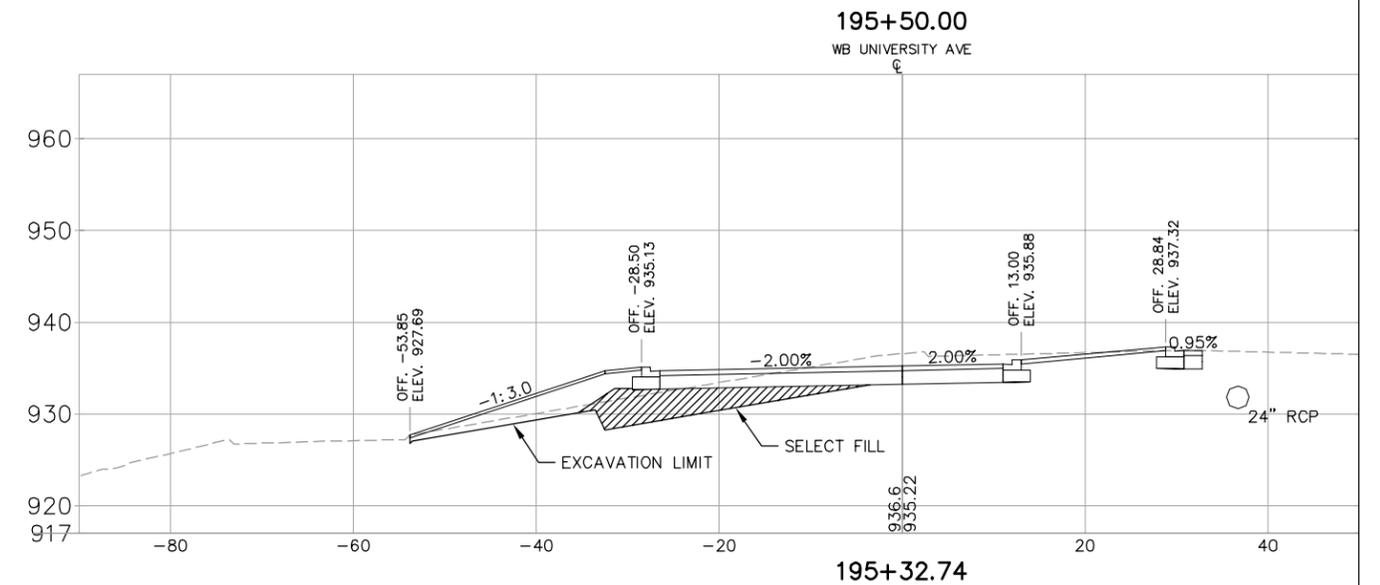
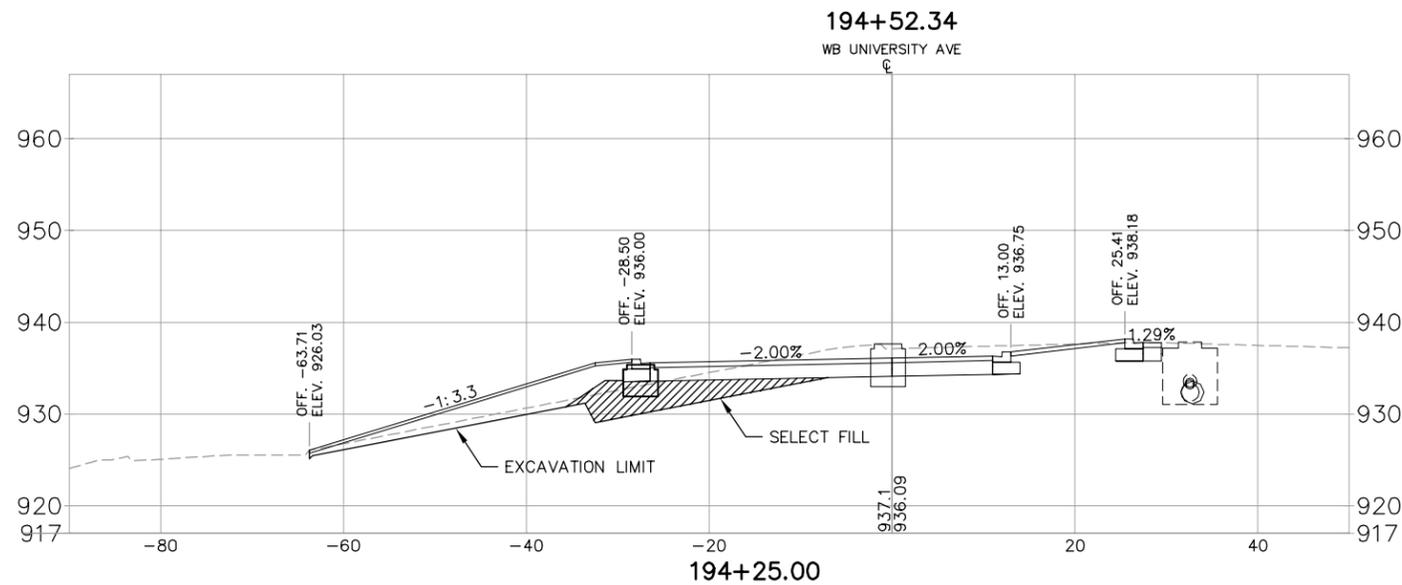


PLOT SCALE: _____

PLOT NAME: _____

REV. DATE: _____

ORIGINATOR : KIMLEY HORN AND ASSOCIATES

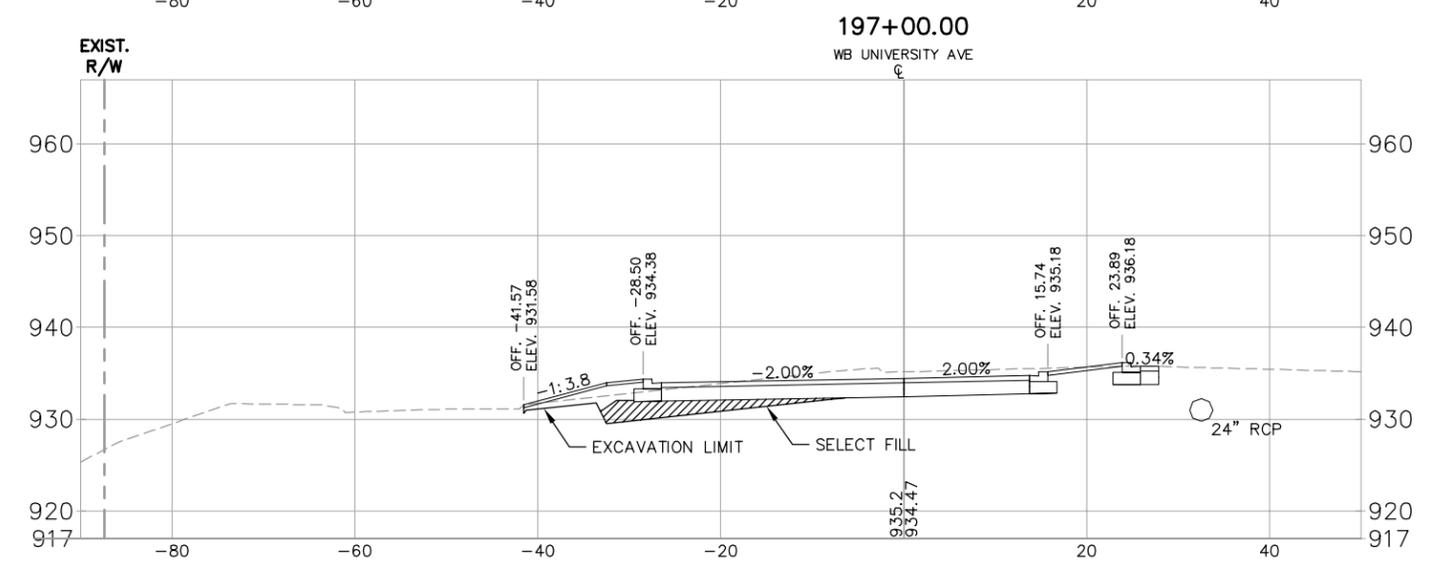
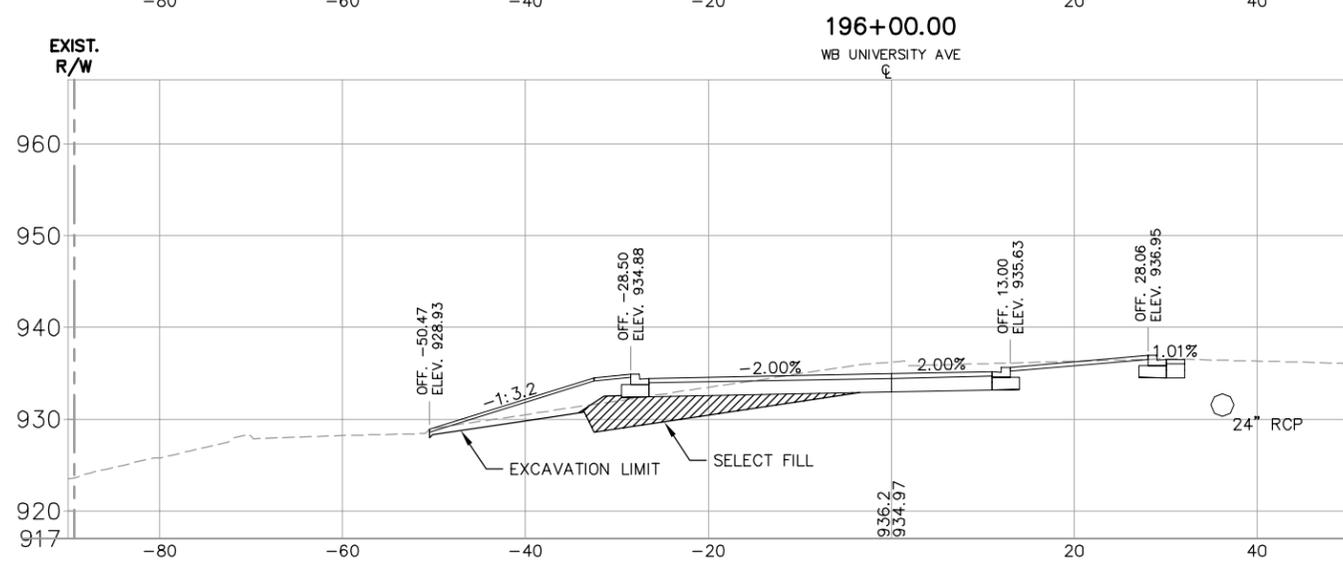
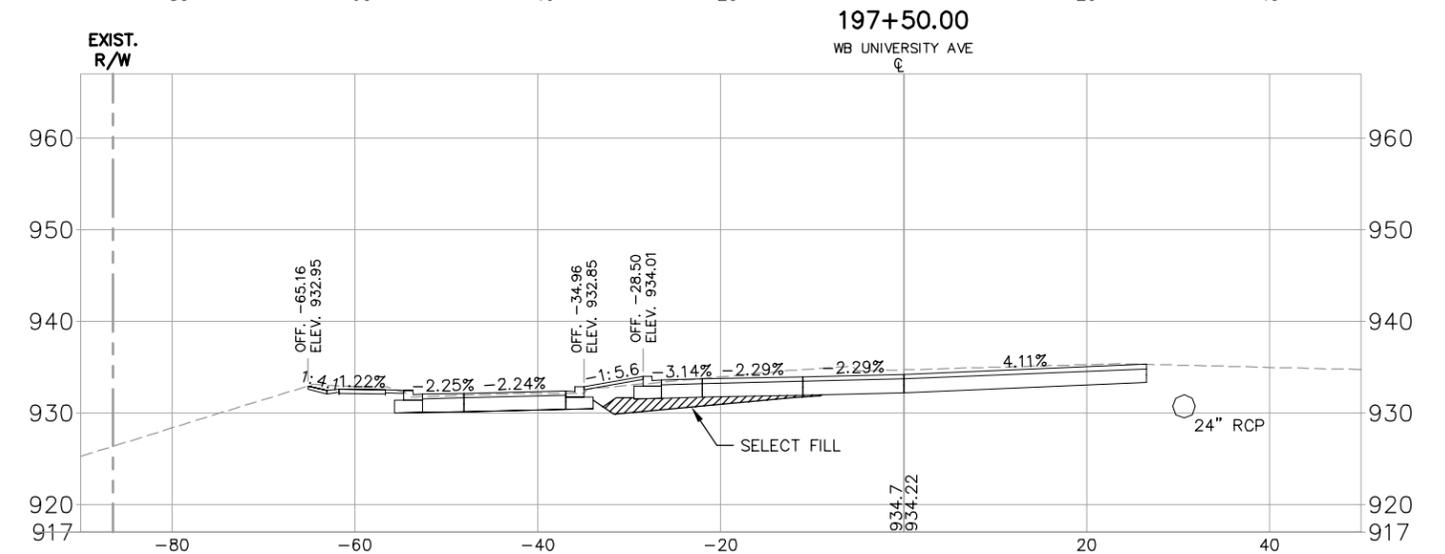
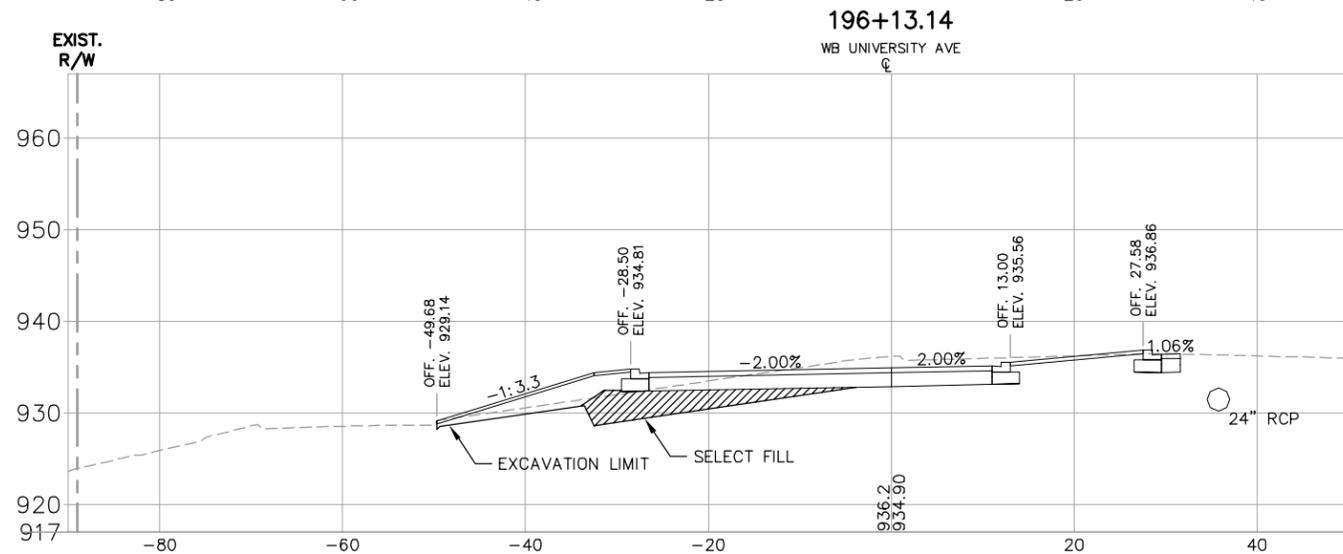
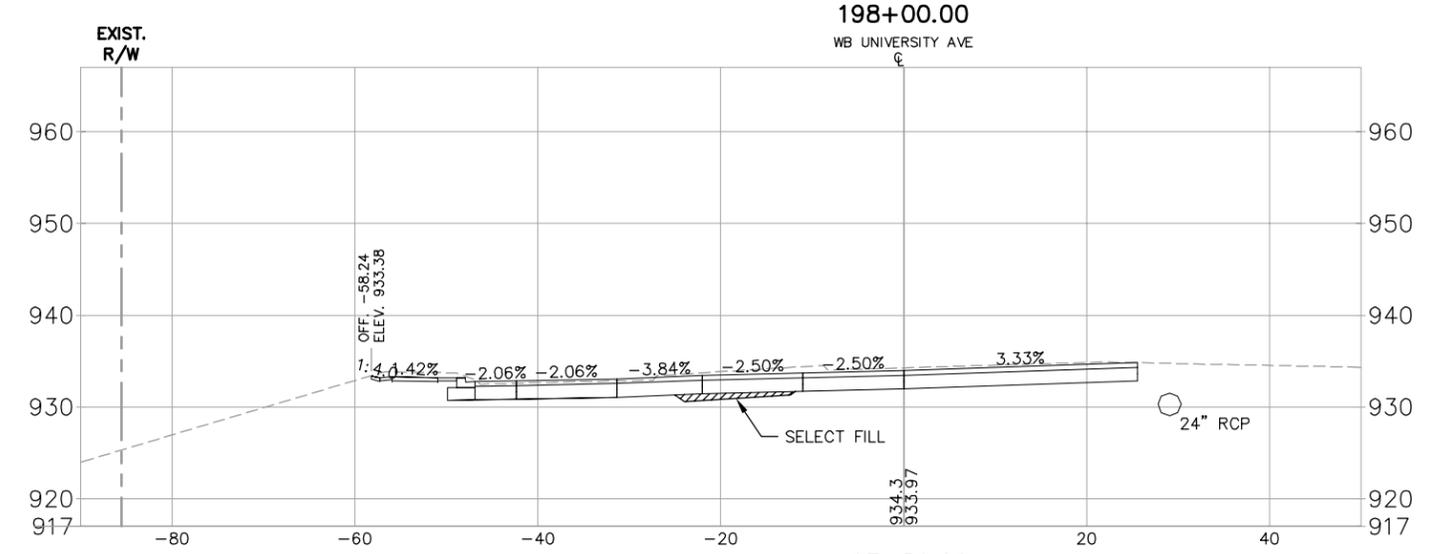
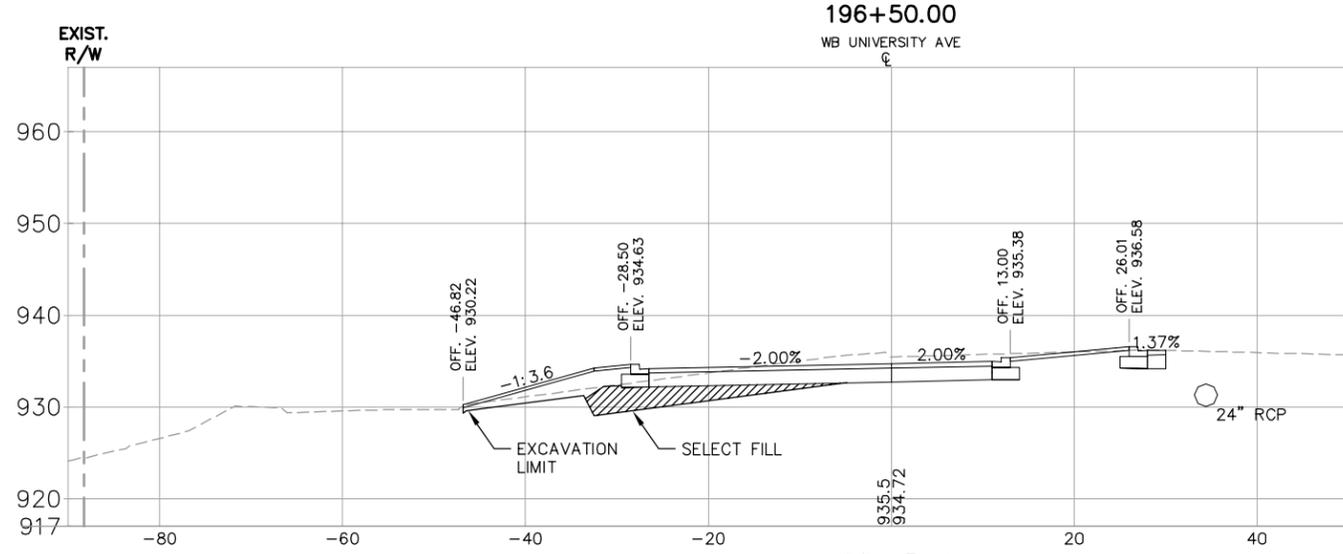


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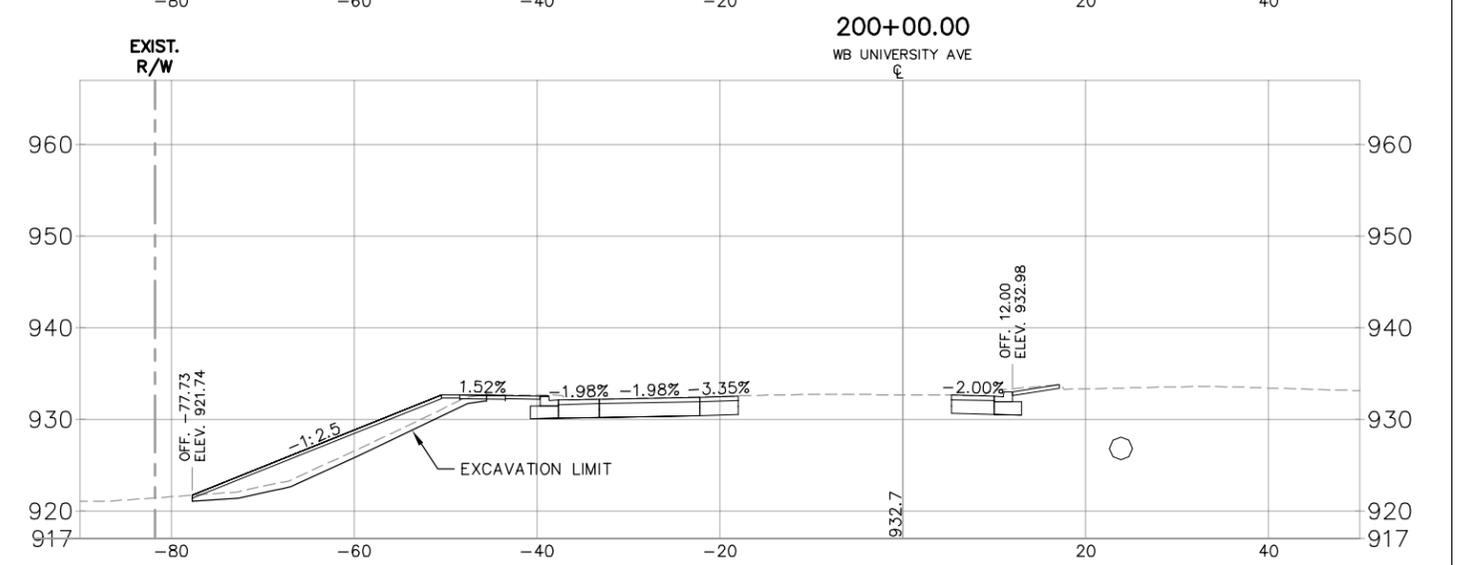
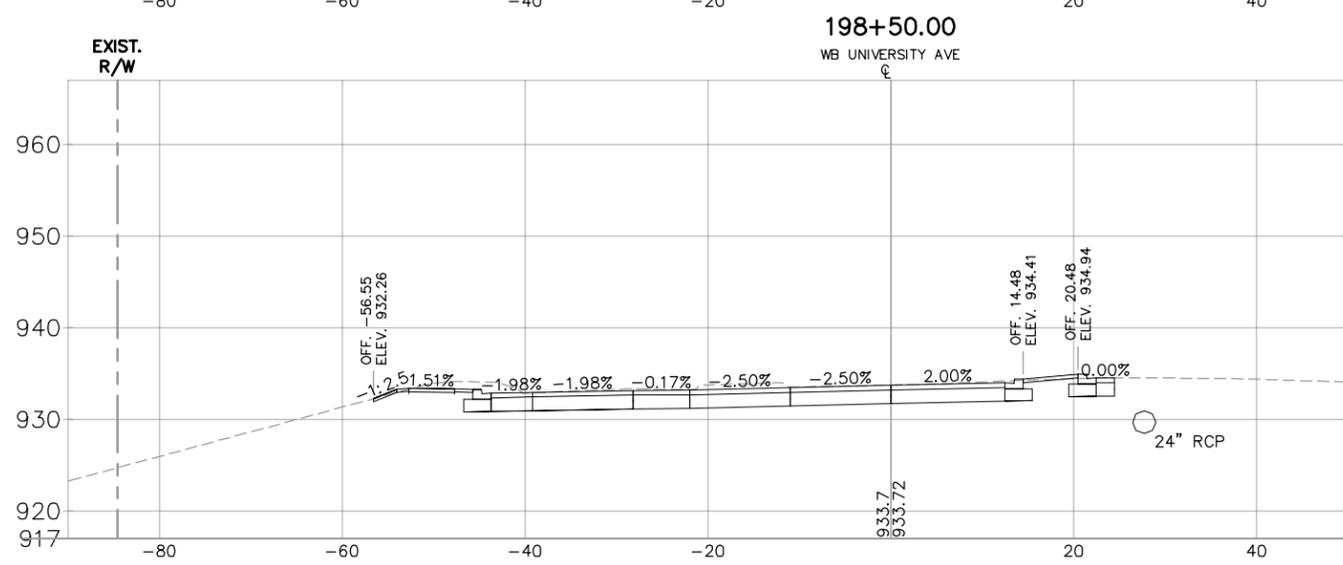
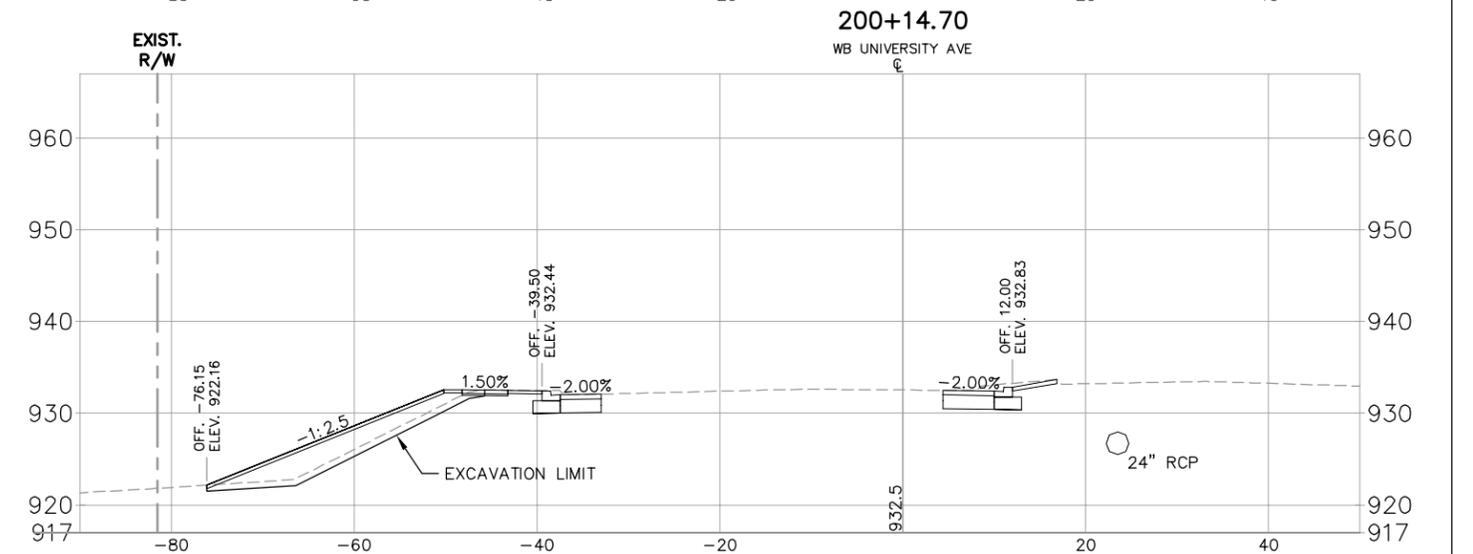
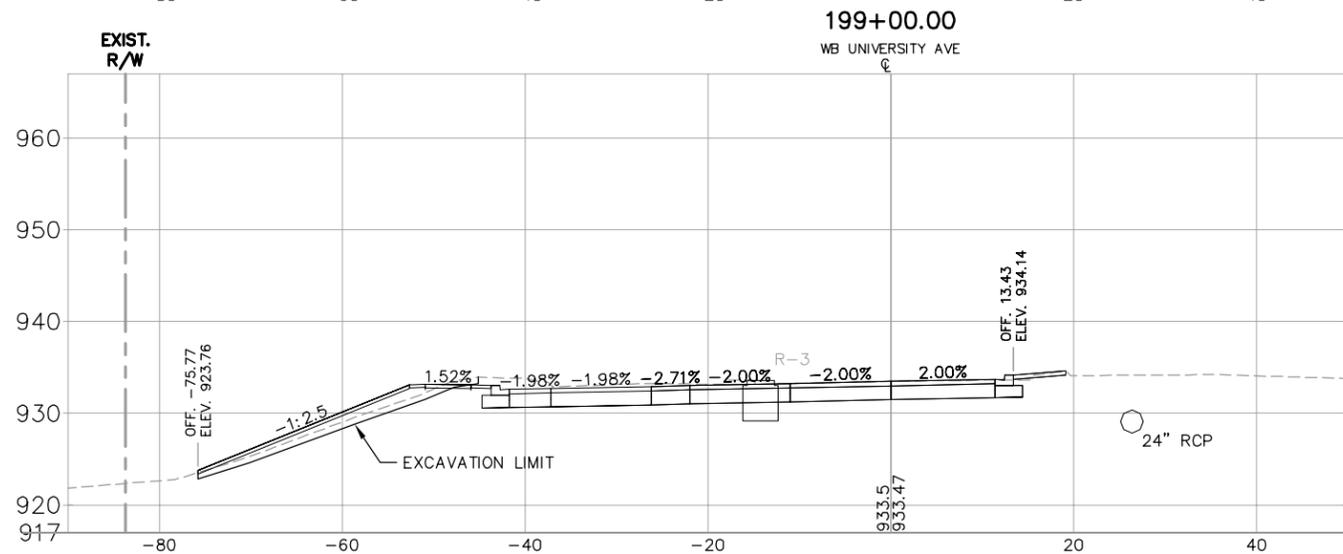
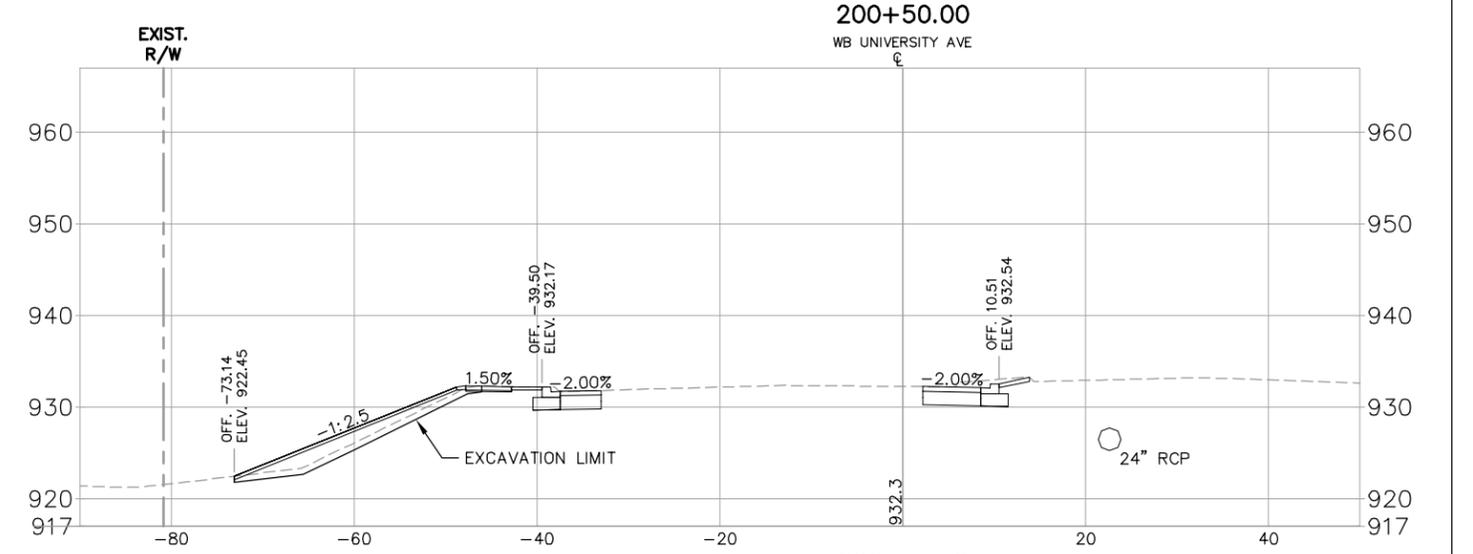
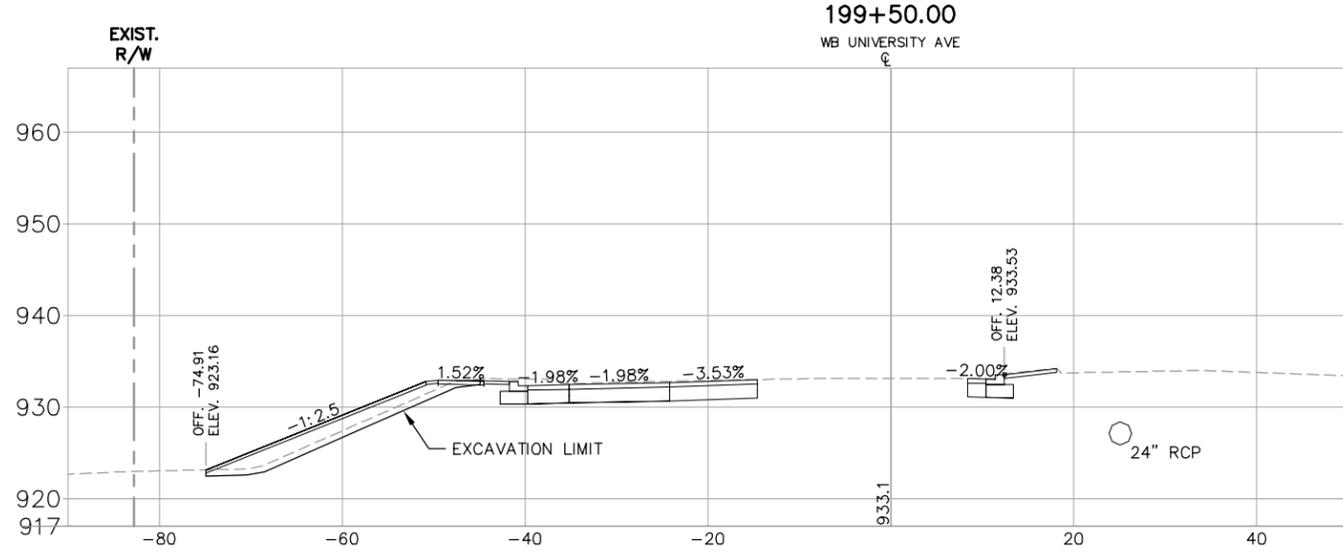


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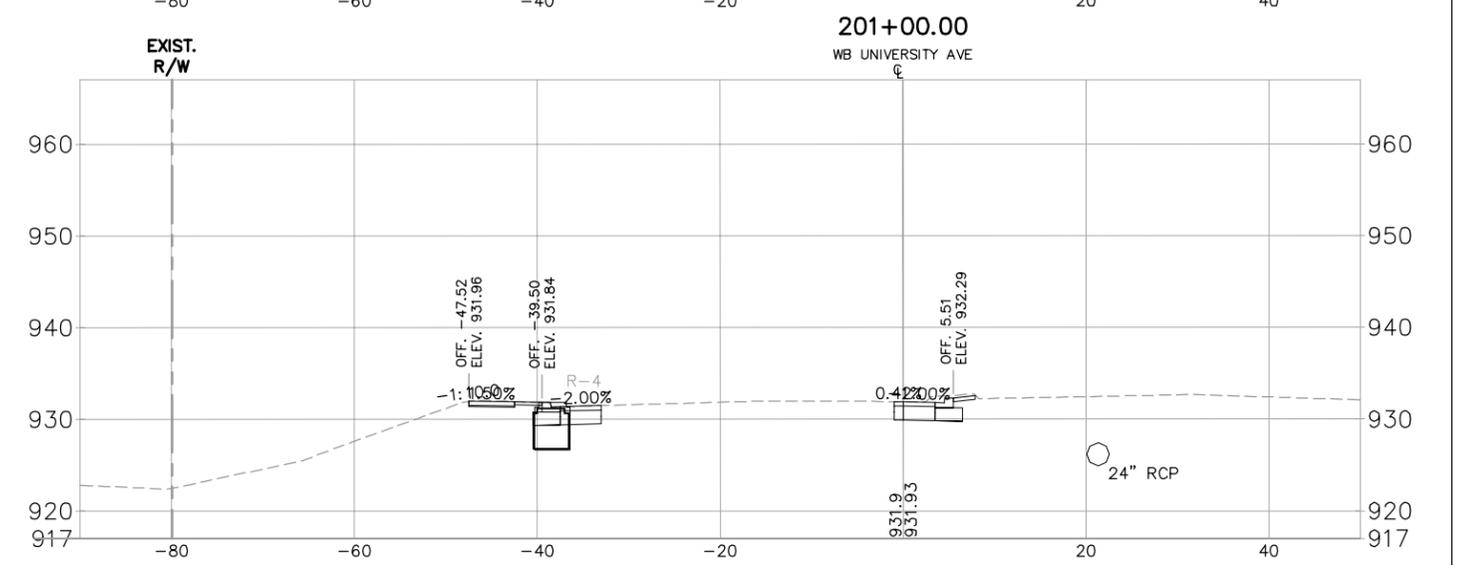
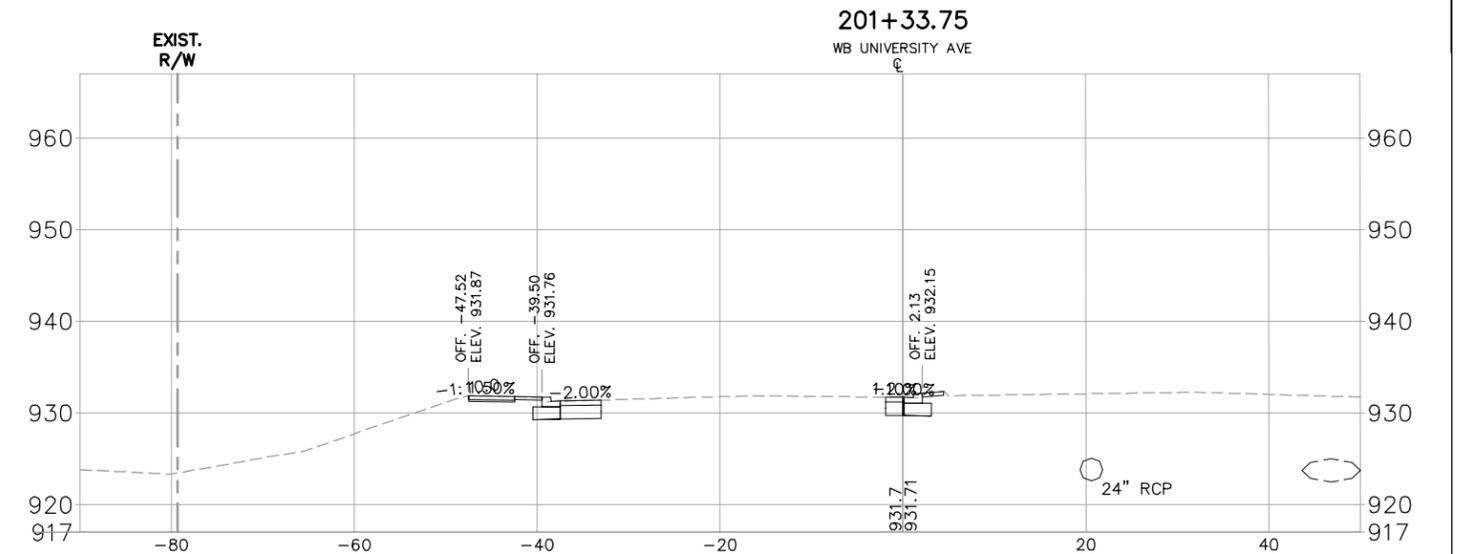
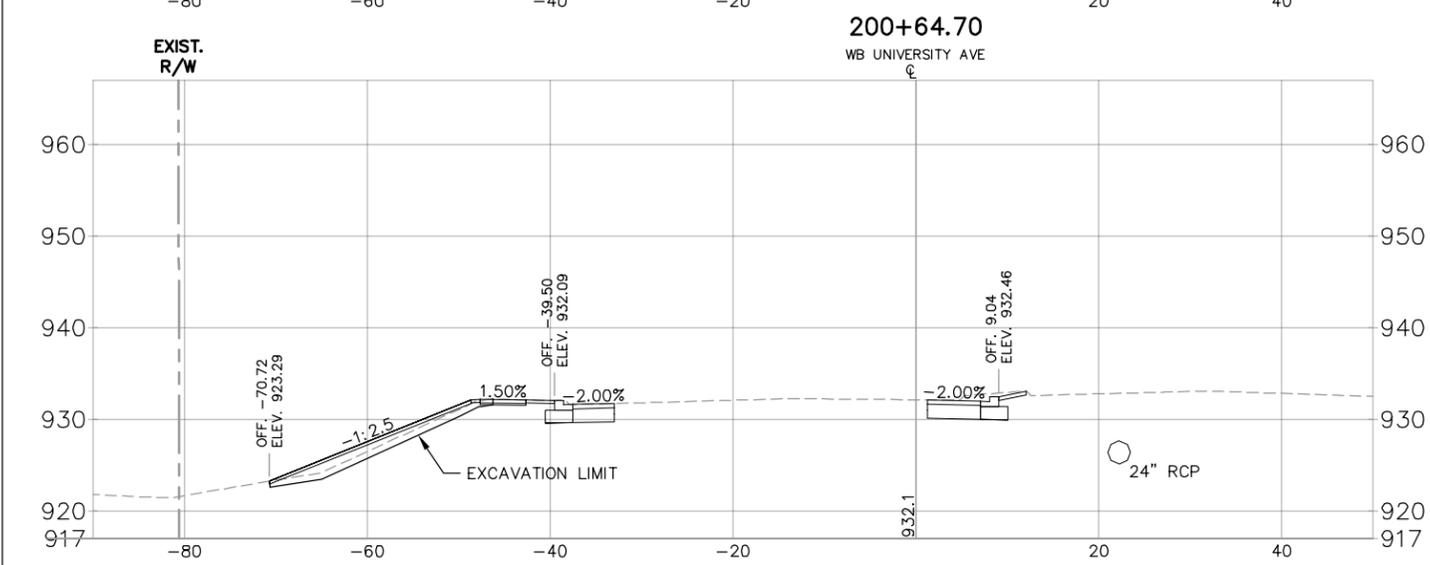
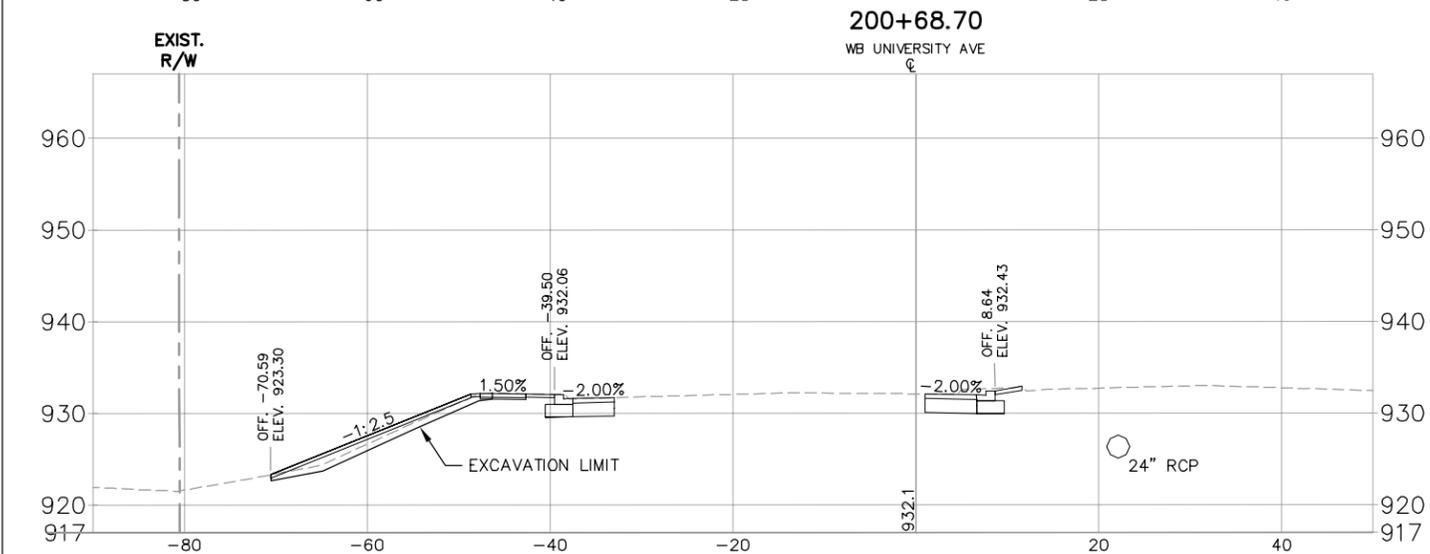
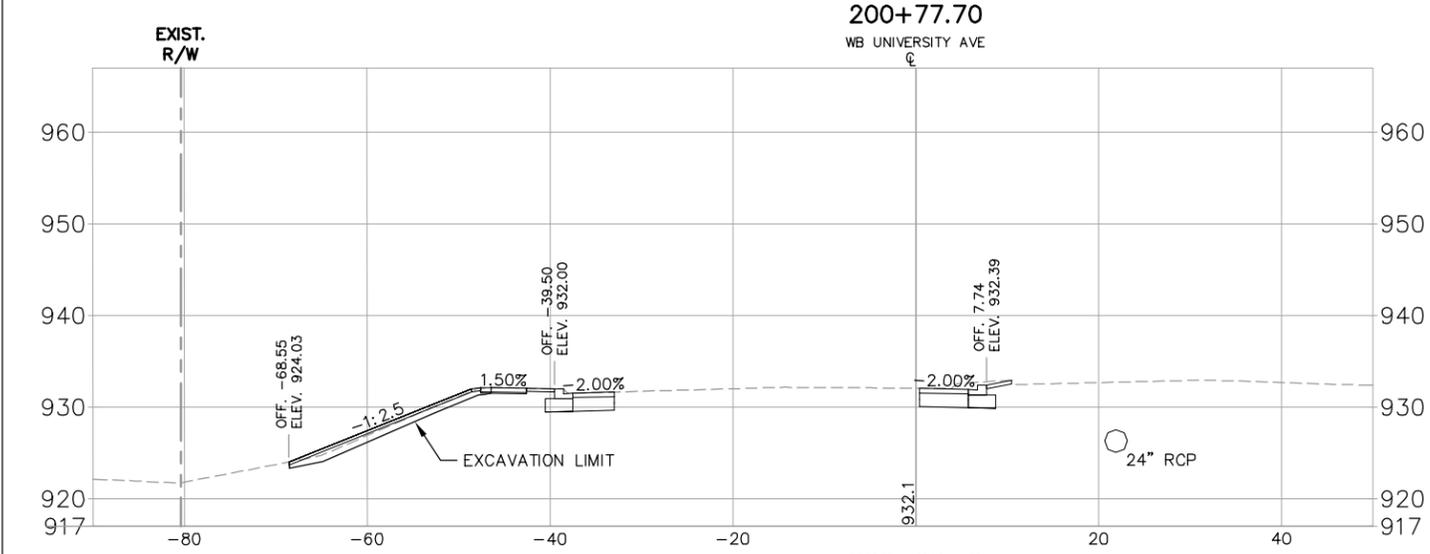
ORIGINATOR : KIMLEY HORN AND ASSOCIATES

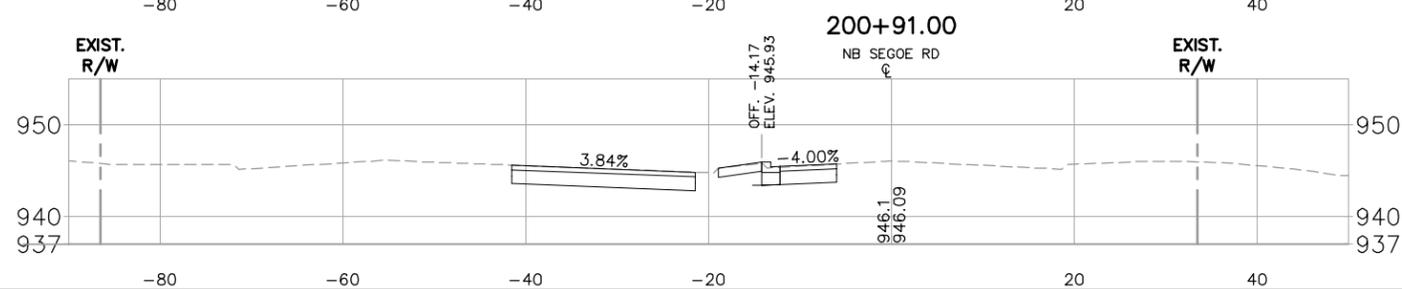
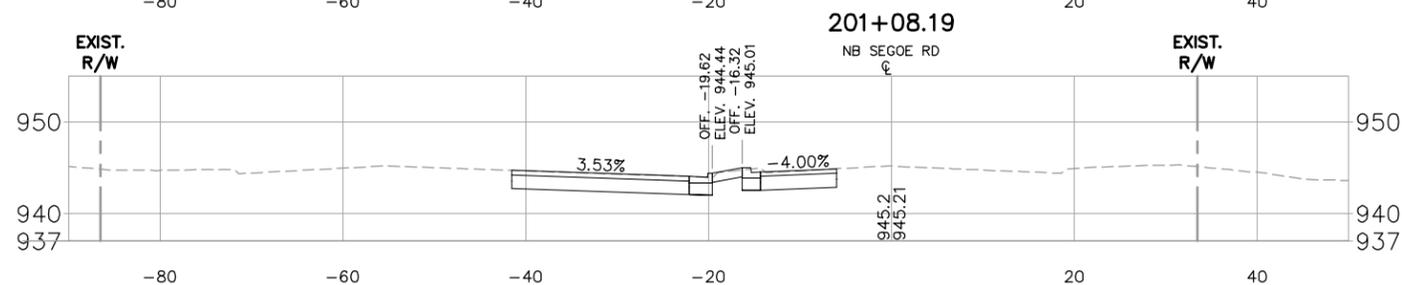
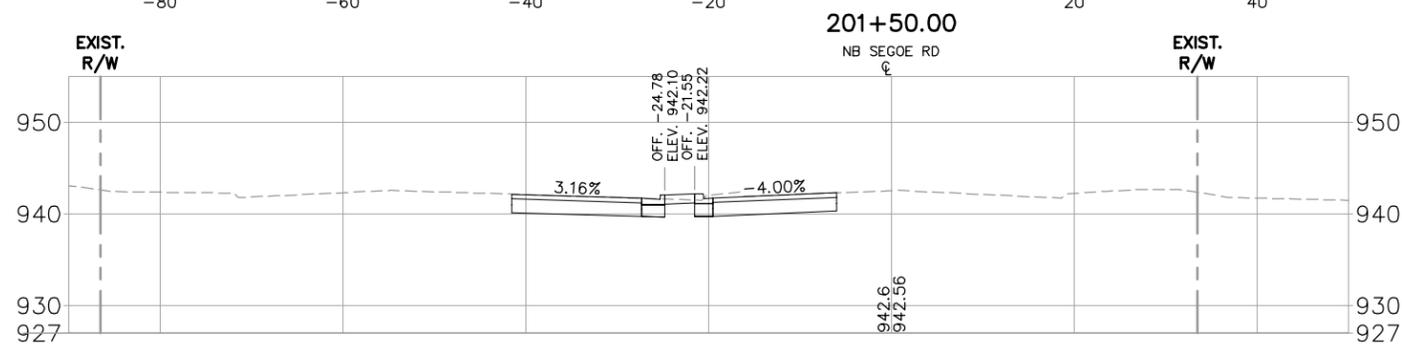
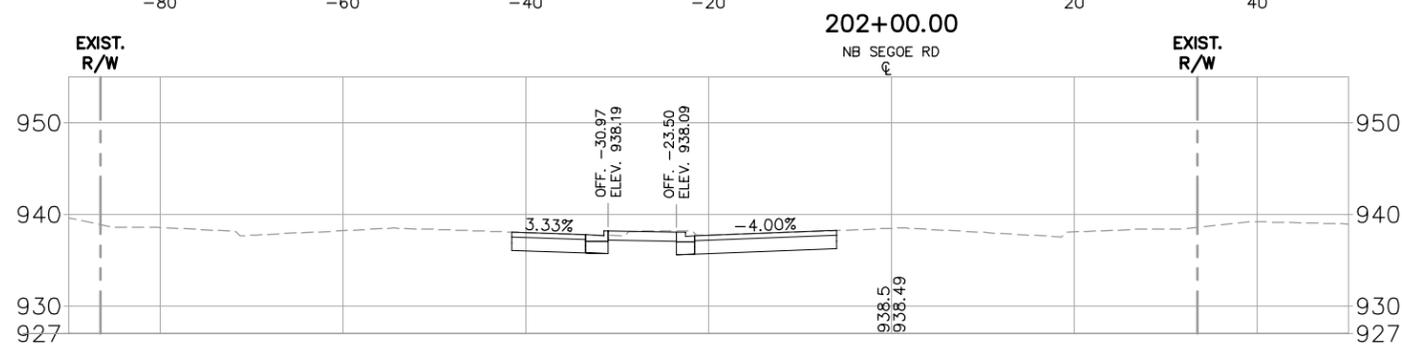
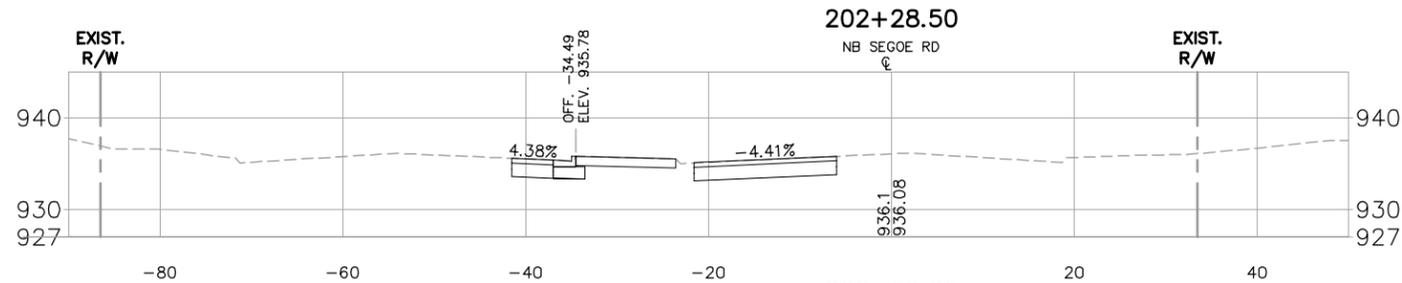
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