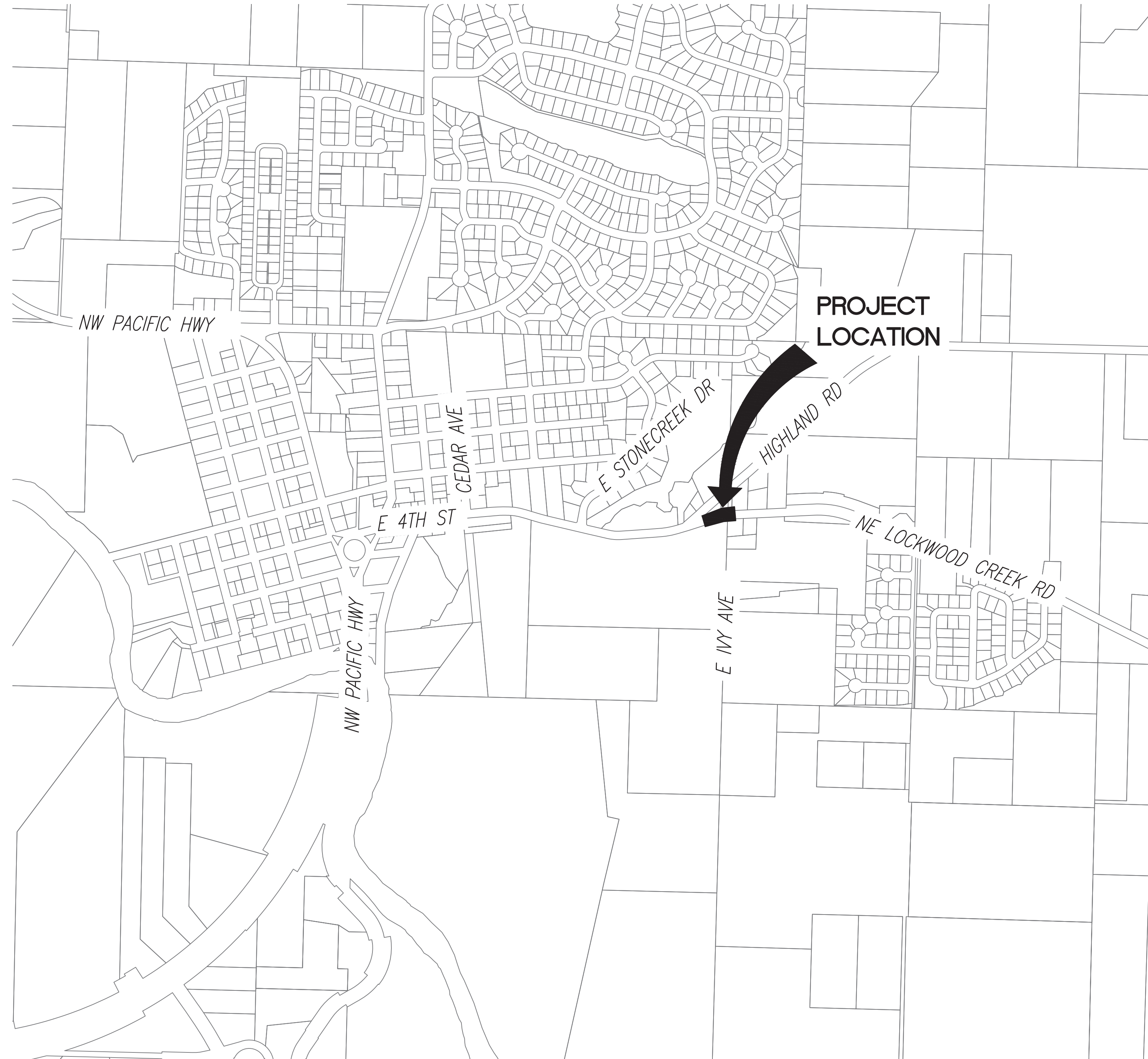


CITY OF LA CENTER 4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL

PLANS FOR THE CONSTRUCTION OF TRAFFIC SIGNAL, ILLUMINATION AND STREET IMPROVEMENTS



VICINITY MAP
NTS

CITY OF LA CENTER PROJECT NO. XXXXX



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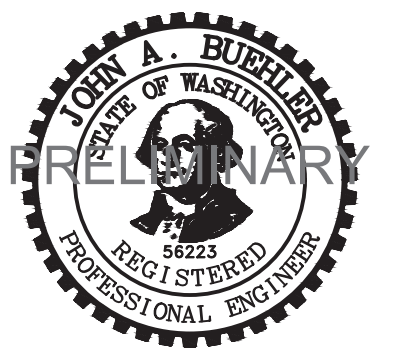
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CITY OF LA CENTER	
Approved _____	Date _____



FINAL PLANS

No.	Revision	Date	By	App'd
1				

FEDERAL AID No.

STPR-XXXXX



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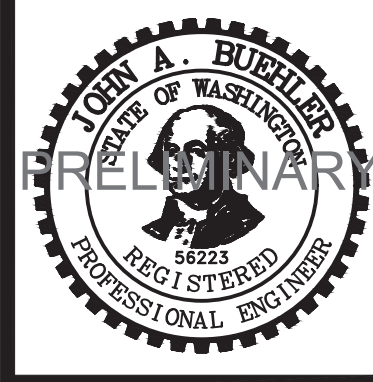
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SHEET 1 OF 50

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LEGEND FOR: 4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



DESIGNED: JAB CHECKED: CMK MAY 2024 71488.000

SHEET ID G02 SHEET 2 OF 50

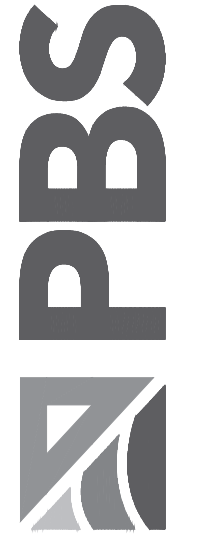
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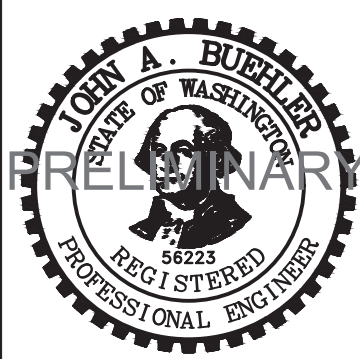
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SHEET INDEX FOR:
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 MAY 2024
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SHEET **3** OF **50**

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GENERAL NOTES:

- THE VERTICAL DATUM FOR THIS SURVEY IS NAVD88, SITE BENCHMARK: PBS CP#2
N: 206628.03'
E: 1087852.88'
THE VERTICAL BENCHMARK IS A MAG NAIL SET IN THE SIDEWALK LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF E 4TH STREET AND E CEDAR AVE, 1.2' WEST OF THE FACE OF CURB, 9' SOUTH OF A FIRE HYDRANT, 15' NE OF A STORM MANHOLE LID.
*ELEVATION WAS DETERMINED BY GPS OBSERVATION USING CORRECTIONS OBTAINED THROUGH THE WASHINGTON STATE REFERENCE NETWORK (WSRN)
- THE BASIS OF BEARINGS FOR THIS SURVEY IS BASED ON OBSERVATIONS WASHINGTON STATE REFERENCE NETWORK (WSRN) HORIZONTAL DATUM: NAD 83_2011, STATE PLANE COORDINATES, (WASHINGTON SOUTH ZONE 4602). DISTANCES SHOWN HERE ARE GROUND DISTANCES.
- ALL CONSTRUCTION AND MATERIALS, UNLESS OTHERWISE SPECIFIED, SHALL BE IN CONFORMANCE WITH THE 2024 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND APWA, AND THE CITY OF LA CENTER PUBLIC WORKS ENGINEERING STANDARDS FOR CONSTRUCTION MANUAL.
- THE UNDERGROUND UTILITIES SHOWN HEREON WERE BASED ON UTILITY LOCATE PAINT MARKS SUPPLIED BY THE WASHINGTON UTILITY NOTIFICATION CENTER (PRE-SURVEY TICKET REQUEST SUBMITTED ON 12/20/2018 AND PROCESSED AS TICKET NUMBER 18535624.) AS WELL AS SURFACE EVIDENCE AND PRIVATE ASBUILT RECORDS. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CONTRACTOR IS ADVISED THAT EXCAVATION MAY BE NECESSARY. ADDITIONALLY, CERTAIN UTILITIES ONSITE (WATER, SANITARY, STORM, GAS, ETC.) MAY NOT HAVE CONDUCTIBLE OR TRACEABLE LINES AND MAY BE PRESENT. UTILITIES SHOWN ON THE PLANS ARE PER SURFACE LOCATES AND RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE TO VERIFY LOCATION OF UNDERGROUND UTILITIES. IF CONFLICTS EXIST, NOTIFY THE ENGINEER.
- CONTRACTOR SHALL NOTIFY OTHER PUBLIC UTILITIES (GAS, PHONE, ELECTRIC, CABLE TV, ETC.) TO MAKE ALL NECESSARY ADJUSTMENTS TO RESPECTIVE FACILITIES.
- THE CONTRACTOR SHALL HAVE A COPY OF THESE PLANS, PROJECT SPECIFICATIONS, ADDENDA, AND CHANGE ORDERS ON THE JOB SITE AT ALL TIMES. THE CONTRACTOR SHALL MAINTAIN AND UPDATE A FULL-SIZE SET OF AS-BUILTS.
- AT THE END OF EACH DAY, THE CONTRACTOR SHALL CLEAN UP THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT FREE OF DEBRIS AND UNUSED MATERIAL.
- IF EXISTING CURB AND SIDEWALK DESIGNATED TO REMAIN ARE DAMAGED, THE CURB AND/OR SIDEWALK SHALL BE REMOVED AND REPLACED TO THE ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ALL CONSTRUCTION WITHIN CITY OF LA CENTER RIGHT-OF-WAY SHALL HAVE AN APPROVED TRAFFIC CONTROL PLAN AND RIGHT-OF-WAY PERMIT PRIOR TO ANY ON-SITE CONSTRUCTION ACTIVITY.
- ALL PAVEMENT SHALL BE SAWCUT PRIOR TO PAVING. EXISTING PAVEMENT SHALL BE REMOVED AS NECESSARY TO PROVIDE A SMOOTH TRANSITION FOR BOTH RIDE AND DRAINAGE.
- CONTRACTOR SHALL REPORT ALL DAMAGES IMMEDIATELY TO THE CITY'S CONSTRUCTION SERVICES OFFICE OR CONTACT THE INSPECTOR ON THE JOB.
- AN ALTERNATE PEDESTRIAN ACCESSIBLE ROUTE OF TRAVEL IS REQUIRED WHEN AN EXISTING ACCESSIBLE ROUTE IS BLOCKED DURING CONSTRUCTION. THE ALTERNATE ACCESSIBLE ROUTE SHALL MEET MINIMUM ACCESSIBLE STANDARDS AS SET FORTH IN THE LATEST VERSION OF THE AMERICAN DISABILITIES ACT ACCESSIBILITY GUIDELINES MANUAL, WSDOT'S WORK ZONE ACCOMMODATION POLICY AS REFERENCED IN CHAPTER 1520 OF THE WSDOT DESIGN MANUAL (MOST CURRENT EDITION), AND THE 2022 EDITION OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION" AS PREPARED BY WSDOT AND APWA.
- CONTRACTOR SHALL MAINTAIN INGRESS/EGRESS FROM ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.
- AT THE END OF EACH WORKDAY THE CONTRACTOR SHALL CLEAN THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.

- PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITIES SHALL CONTRIBUTE TO THE DEGENERATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO ENTER THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTION THAT POTENTIALLY ALLOWS A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY. IT IS CRITICAL THAT NO SEDIMENT BE ALLOWED TO MIGRATE FROM THE CONSTRUCTION AREA OR DURING TRANSPORTATION OF EQUIPMENT AND MATERIALS TO THE WORK AREA. THE CONTRACTOR SHALL BE FAMILIAR WITH THE CITY OF LA CENTER MUNICIPAL CODE. A STOP WORK ORDER WILL BE ISSUED UPON ANY OCCURRENCE OF SEDIMENT TRANSPORT, TRACKING, OR OTHER RELATED PROBLEMS. VIOLATIONS OF THE LA CENTER MUNICIPAL CODE AND THE CLEAN WATER ACT ARE SUBJECT TO ENFORCEMENT ACTIONS AND FINES BY THE CITY OF LA CENTER AND THE DEPARTMENT OF ECOLOGY.
- TOXIC CLEANUP: NO CONTAMINATED SITES ARE LOCATED WITHIN APPROXIMATELY A HALF A MILE OF THE PROJECT. THE PROJECT SHOULD NOT COVER OR INTERFERE WITH EXISTING MONITORING WELLS OR STRUCTURES RELATED TO CLEANUP ACTIVITY, IF ANY ARE PRESENT. IF ENVIRONMENTAL CONTAMINATION IS ENCOUNTERED IT SHOULD BE MANAGED SO IT DOES NOT SPREAD TO OTHER MEDIA OR OFF-SITE, AND DISCOVERY AND CLEANUP SHOULD BE DOCUMENTED FOR AND REPORTED TO ECOLOGY'S SOUTHWEST REGIONAL OFFICE BY CONTACTING THE ENVIRONMENTAL REPORT TRACKING SYSTEM COORDINATOR AT (360) 407-6300.
- INADVERTENT DISCOVERY PLAN: IN THE EVENT ANY ARCHAEOLOGICAL OR HISTORIC MATERIALS ARE ENCOUNTERED DURING PROJECT ACTIVITY, WORK IN THE IMMEDIATE AREA (INITIALLY ALLOWING FOR A 100' BUFFER; THIS NUMBER MAY VARY BY CIRCUMSTANCE) MUST STOP AND THE FOLLOWING ACTIONS TAKEN:
 - ADVISE OWNER; AND
 - IMPLEMENT REASONABLE MEASURES TO PROTECT THE DISCOVERY SITE, INCLUDING ANY APPROPRIATE STABILIZATION OR COVERING; AND
 - TAKE REASONABLE STEPS TO ENSURE THE CONFIDENTIALITY OF THE DISCOVERY SITE; AND,
 - TAKE REASONABLE STEPS TO RESTRICT ACCESS TO THE SITE OF DISCOVERY.
 - THE CITY WILL NOTIFY THE CONCERNED TRIBES AND ALL APPROPRIATE COUNTY, STATE, AND FEDERAL AGENCIES, INCLUDING THE DEPARTMENT OF ARCHAEOLOGY AND HISTORIC RESERVATION, THE AGENCIES AND TRIBE(S) WILL DISCUSS POSSIBLE MEASURES TO REMOVE OR AVOID CULTURAL MATERIAL, AND WILL REACH AN AGREEMENT WITH THE PROJECT PROPONENT REGARDING ACTIONS TO BE TAKEN AND DISPOSITION OF MATERIAL. IF HUMAN REMAINS ARE UNCOVERED, APPROPRIATE LAW ENFORCEMENT AGENCIES SHALL BE NOTIFIED FIRST, AND THE ABOVE STEPS FOLLOWED. IF THE REMAINS ARE DETERMINED TO BE NATIVE, CONSULTATION WITH THE AFFECTED TRIBES WILL TAKE PLACE IN ORDER TO MITIGATE THE FINAL DISPOSITION OF SAID REMAINS. SEE THE REVISED CODE OF WASHINGTON, CHAPTER 27.53, "ARCHAEOLOGICAL SITES AND RESOURCES;" FOR APPLICABLE STATE LAWS AND STATUTES. SEE ALSO WASHINGTON STATE EXECUTIVE ORDER 21-02, "ARCHAEOLOGICAL AND CULTURAL RESOURCES;" ADDITIONAL STATE AND FEDERAL LAW(S) MAY ALSO APPLY.

GRADING NOTES:

- ALL GRADING SHALL CONFORM TO THE 2024 EDITION OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND THE CITY OF LA CENTER PUBLIC WORKS ENGINEERING STANDARDS FOR CONSTRUCTION MANUAL.
- THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT IN FULL PREPARED BY PBS ENGINEERING + ENVIRONMENTAL, INC TITLED "GEOTECHNICAL ENGINEERING REPORT BREZEE CREEK CULVERT REPLACEMENT." THE CONTRACTOR SHALL FOLLOW ALL RECOMMENDATIONS AS DETAILED IN THE REPORT.
- THE LIMITS OF CLEARING SHALL BE FLAGGED PRIOR TO CLEARING AND GRUBBING OF THE SITE.
- PRIOR TO ANY FILL PLACEMENT, ALL AREAS WHICH WILL RECEIVE STRUCTURAL FILL SHALL BE EXCAVATED TO FIRM, NON-ORGANIC, UNDISTURBED NATIVE GROUND. THE STRIPPED AREAS SHALL BE OBSERVED AND ACCEPTED BY THE GEOTECHNICAL ENGINEER AND THE CITY OF LA CENTER INSPECTOR.
- ALL RIGHT-OF-WAY FILLS SHALL MEET 95% OF AASHTO T-180 COMPACTION.
- FILLS SHALL BE INSTALLED IN VERTICAL LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND SHALL BE COMPACTED AS PREVIOUSLY NOTED.

- FILLS PLACED ON SLOPES EXCEEDING 5H: 1V SHALL BE KEYED AND BENCHED, GEOTECHNICAL APPROVAL REQUIRED PRIOR TO ANY FILL PLACEMENT.
- ALL SURFACES SHALL BE GRADED SMOOTH AND BE FREE OF IRREGULARITIES THAT MIGHT ACCUMULATE SURFACE WATER.
- ALL CUT AND FILL SLOPES SHALL NOT EXCEED 2:1 SLOPES.
- ANY EXCESS MATERIAL NOT REQUIRED TO MEET THE GRADES SHOWN ON THE PLANS SHALL BE HAULED FROM THE SITE TO A CONTRACTOR PROVIDED WASTE SITE. IF WASTE SITE IS WITHIN CITY LIMITS, A GRADING PERMIT MAYBE REQUIRED.
- ALL EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY SUITABLE APPLICATION OF EROSION CONTROL BMP'S.

EROSION/SEDIMENT CONTROL NOTES:

- THE GRADING & EROSION CONTROL (EC01-EC02) PLAN IS TO BE UTILIZED AS A GUIDE TO CONTROL THE TRANSPORT OF LOOSE SOILS TO THE PROPERTY OUTSIDE OF THE CONSTRUCTION AREA AND AROUND THE CONSTRUCTION SITE. THE EROSION/SEDIMENT CONTROL MEASURES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
- THE IMPLEMENTATION OF THE GRADING & EROSION CONTROL (EC01-EC02) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADE OF THE EROSION/SEDIMENT CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED, AND PERMANENT VEGETATION/LANDSCAPING IS ESTABLISHED.
- IF THE CITY INSPECTOR OR ENGINEER(S) HAS EVIDENCE OF POOR CONSTRUCTION PRACTICES OR EROSION CONTROL TECHNIQUES, A "STOP WORK" ORDER SHALL BE ISSUED UNTIL PROPER MEASURES HAVE BEEN TAKEN AND APPROVED BY THE CITY ENGINEERING STAFF.
- THE CONTRACTORS SHALL BE RESPONSIBLE TO FAMILIARIZE THEMSELVES WITH THE MOST RECENTLY ADOPTED EDITION OF THE CITY OF LA CENTER MUNICIPAL CODE CHAPTER 18.320.
- ALL EROSION/SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND IN WORKING CONDITION PRIOR TO DISTURBING AND EXPOSING ANY SOIL SURFACES (I.E. CONSTRUCTION ENTRANCES, FILTER FABRIC SEDIMENT BARRIERS, AND SEDIMENTATION TRAPS) AND MAINTAINED FOR THE DURATION OF THE PROJECT. TRAPPED SEDIMENT IN EXCESS OF 1 FOOT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED SOIL AREAS RESULTING FROM VEGETATION REMOVAL SHALL BE PERMANENTLY STABILIZED. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE CLEARING LIMITS AND/OR ANY EASEMENTS, SENSITIVE OR CRITICAL AREAS, AND THEIR BUFFERS, TREES, AND DRAINAGE COURSES FLAGGED PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. FLAGGING LIMITS ARE TO BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- REMOVE ONLY THOSE TREES AND SHRUBS THAT NEED TO BE REMOVED FOR THE CONSTRUCTION OF ROADS, SIDEWALKS, UTILITIES, AND STORMWATER FACILITIES. SEE SITE PREPARATION PLAN FOR PROTECT/REMOVE INFORMATION, SHEETS SP01-SP02.
- ALL EXISTING AND NEWLY CONSTRUCTED ROAD CATCH BASINS AND CURB INLETS AFFECTED BY CONSTRUCTION SHALL BE PROTECTED AGAINST SEDIMENT DEPOSITS. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- ALL POLLUTANTS THAT OCCUR ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF THE STORMWATER SYSTEM.
- ALL DISTURBED SOIL SURFACES ARE TO BE STABILIZED BY A SUITABLE APPLICATION OF "BEST MANAGEMENT PRACTICES" (BMP'S). DURING THE PERIOD OF OCTOBER 1 THROUGH JULY 5 DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO TWO DAYS WHEN NOT BEING WORKED. FROM JULY 5 THROUGH OCTOBER 1, DISTURBED SOILS MAY REMAIN UNSTABILIZED FOR UP TO 7 DAYS WHEN NOT BEING WORKED. STABILIZATION OF DISTURBED SOIL AREAS MAY CONSIST OF HYDROSEEDING, HAND-SEEDING AND MULCHING, PLACEMENT OF EROSION CONTROL BLANKETS OR PLASTIC. ALL SEEDED AREAS ARE TO BE FERTILIZED, WATERED, AND MAINTAINED TO ENSURE THAT THE GROWTH OF VEGETATION OCCURS AS SOON AS POSSIBLE.

- ALL TEMPORARY SEDIMENT AND EROSION CONTROL BMP'S SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR POLICING THE JOB SITE DAILY AND MAINTAINING THE EROSION/SEDIMENT CONTROL MEASURES THROUGHOUT ALL PHASES OF CONSTRUCTION. AN INSPECTION LOG SHALL BE KEPT AND MADE AVAILABLE TO THE CITY OF LA CENTER. THE POLICING AND MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - VERIFYING THAT ALL AREAS ARE GRADED SUCH THAT ALL RUNOFF IS DIRECTED TO A SEDIMENTATION DEVICE BEFORE DISCHARGE TO SURFACE.
 - REMOVAL OF TRAPPED SILT A T SILT BARRIERS, SILT TRAPS, OR POINTS OF ACCUMULATION.
 - ADDITIONAL PROTECTIVE MEASURES DUE TO JOB SITE OR WEATHER CONDITIONS AS REQUIRED BY THE CITY OF LA CENTER.
 - MONITORING OF VEHICLES LEAVING THE SITE TO MINIMIZE TRANSMISSION OF LOOSE SOILS TO THE PUBLIC ROADWAYS.
 - VERIFY THAT ALL PROPERTIES ADJACENT TO THE PROJECT SITE ARE PROTECTED FROM SEDIMENTATION DEPOSITION. THIS MAY BE ACCOMPLISHED BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENTATION BARRIERS, FILTERS OR DIKES, SEDIMENTATION BASINS/TRAPS, OR BY A COMBINATION OF SUCH MEASURES.
- CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES SHALL BE STABILIZED IN ACCORDANCE WITH EROSION/SEDIMENT CONTROL NOTE 10. SLOPES FOUND TO BE ERODING EXCESSIVELY WITHIN TWO YEARS OF CONSTRUCTION MUST BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES. THESE MEASURES MAY CONSIST OF ROUGHENED SOIL SURFACES, INTERCEPTORS, DIVERSIONS OR TERRACES, TEMPORARY OR PERMANENT CHANNELS, ADDITIONAL VEGETATION, OR PIPE SLOPE DRAINS AS REQUIRED BY THE CITY OF LA CENTER UNTIL THE PROBLEM IS CORRECTED.
- THE ESC MEASURES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING ANY STORM EVENT.

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NOTES FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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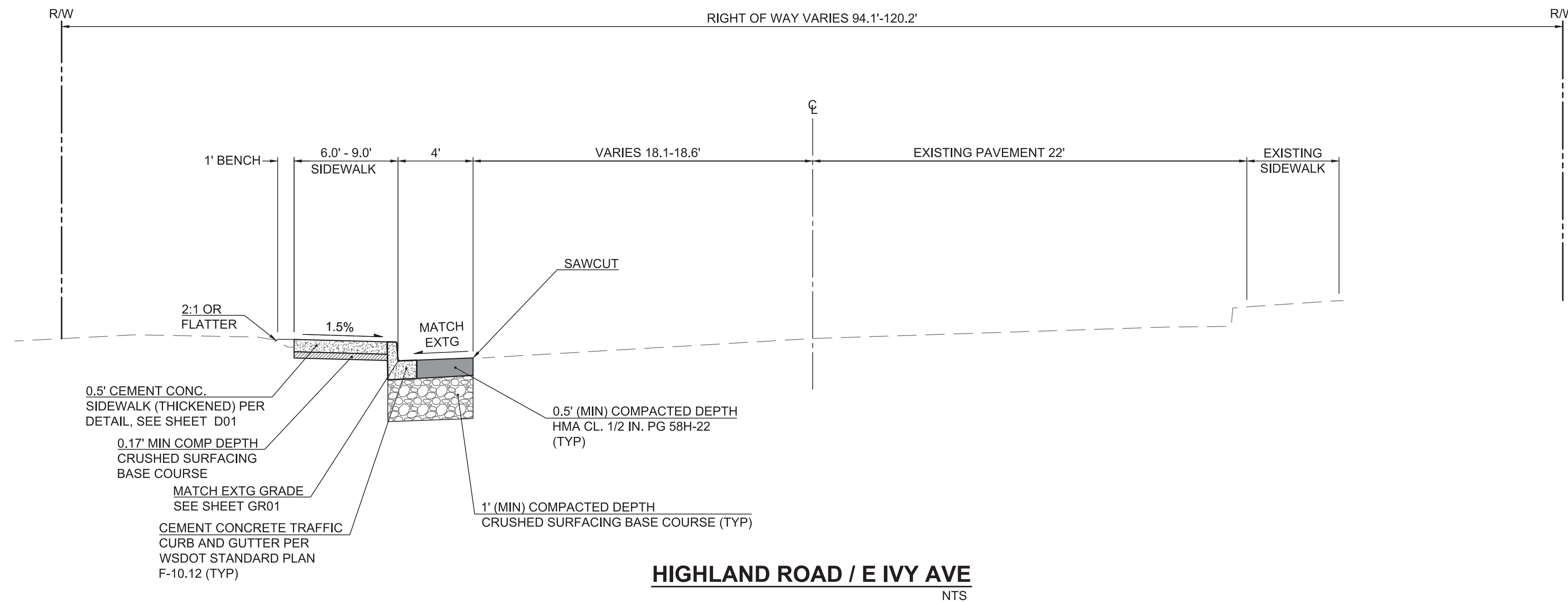
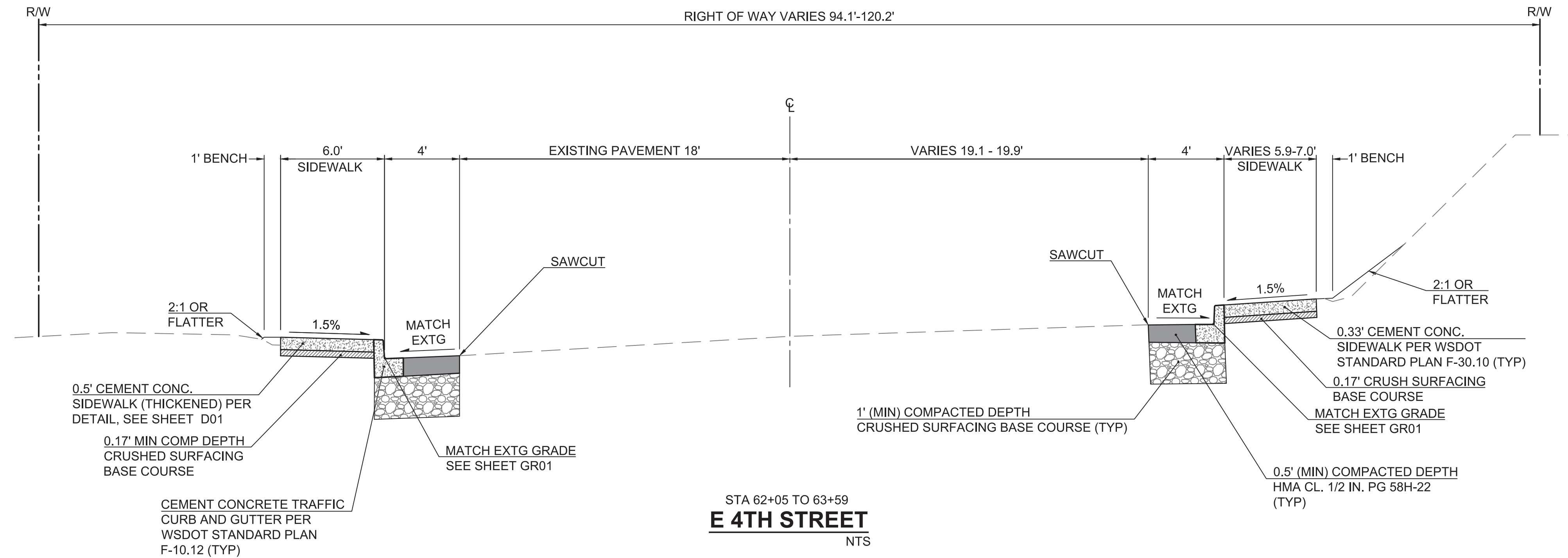


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TYPICAL SECTIONS FOR:
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A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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SHEET 5 OF 50

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DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. VARIABLE INVERT, SUMP, AND BASIN BODY HEIGHT AVAILABLE. RISERS ARE NEEDED FOR BASINS OVER 84" (IN) DUE TO SHIPPING RESTRICTIONS. THE MAXIMUM DEPTH FROM FINISHED GRADE TO THE LOWEST INVERT SHALL BE 8' (FT).

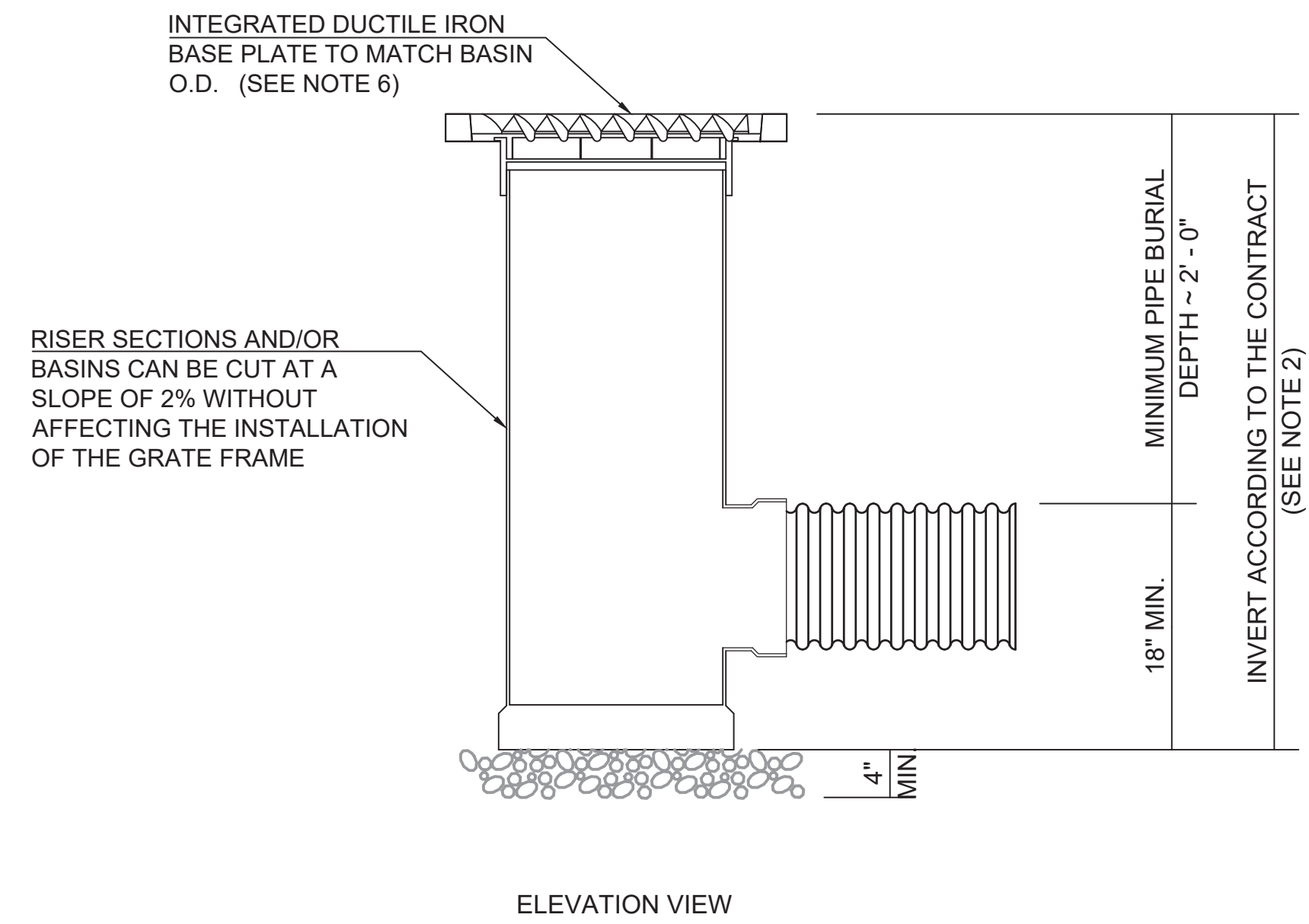
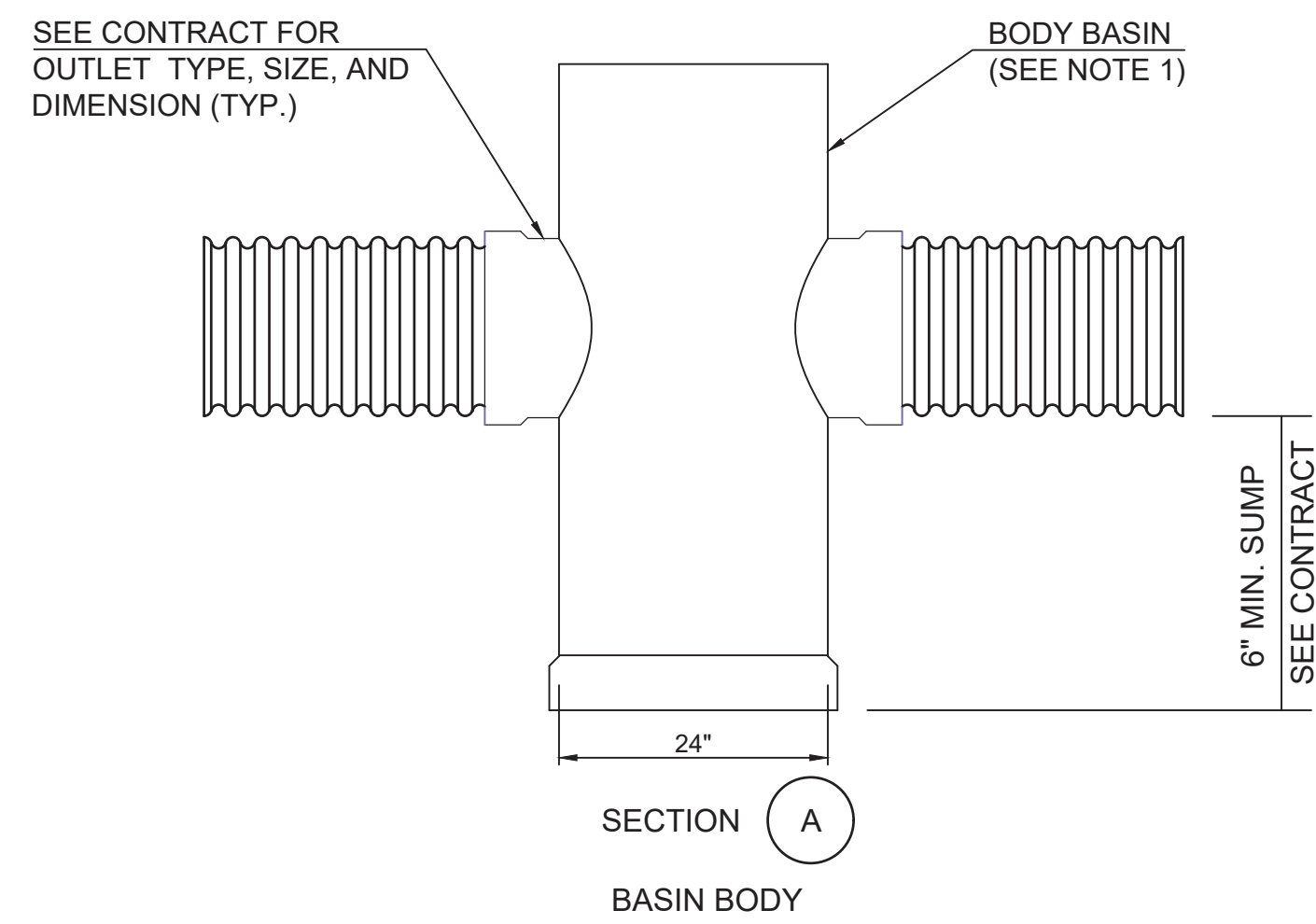
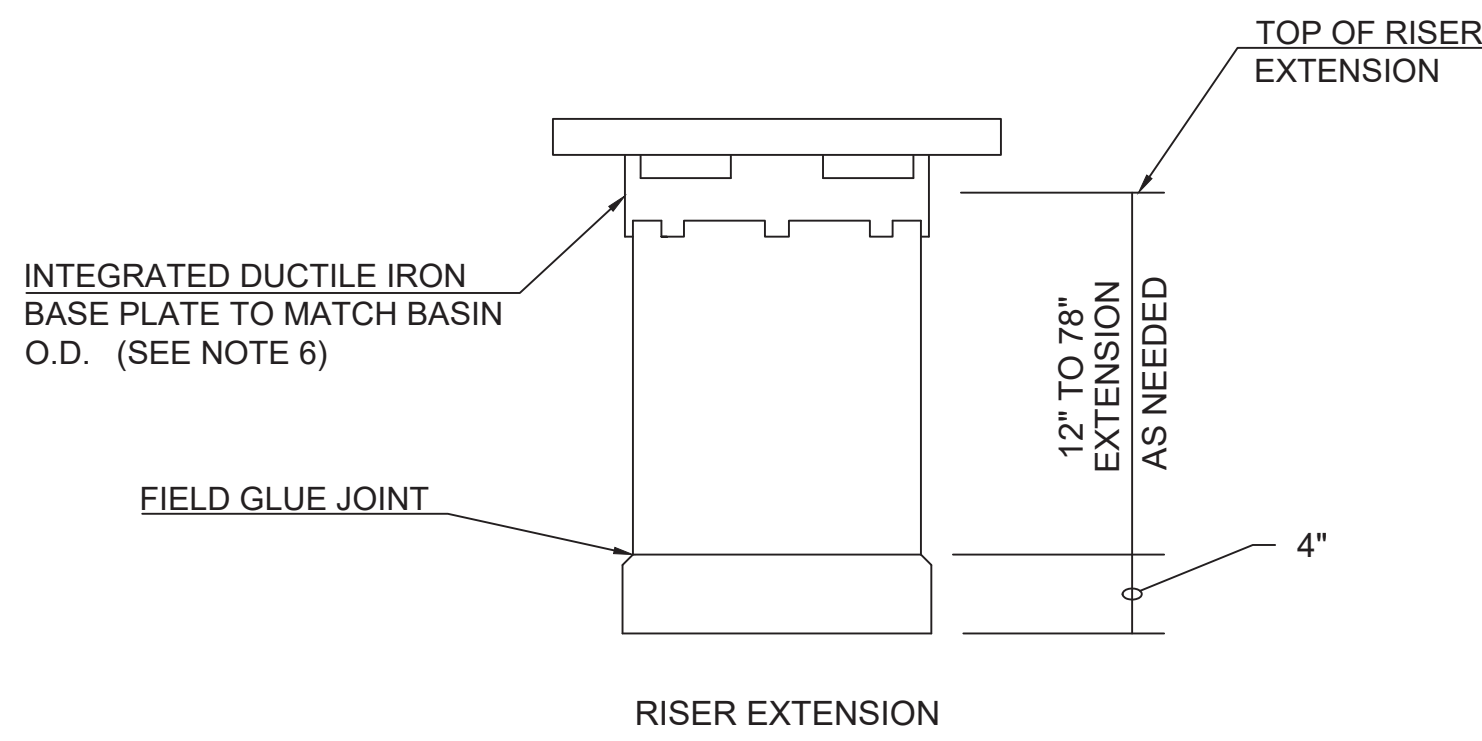
DRAINAGE CONNECTIONS STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE AND PVC SEWER (4" (IN) - 24" (IN)).

RISERS CAN BE TRIMMED DOWN TO 3" (IN) EXTENSION WITHOUT INTERFERING WITH THE INSTALLATION OF THE FRAME.

THE MAXIMUM DEPTH FROM FINISHED GRADE TO THE LOWEST INVERT SHALL BE 8' (FT).

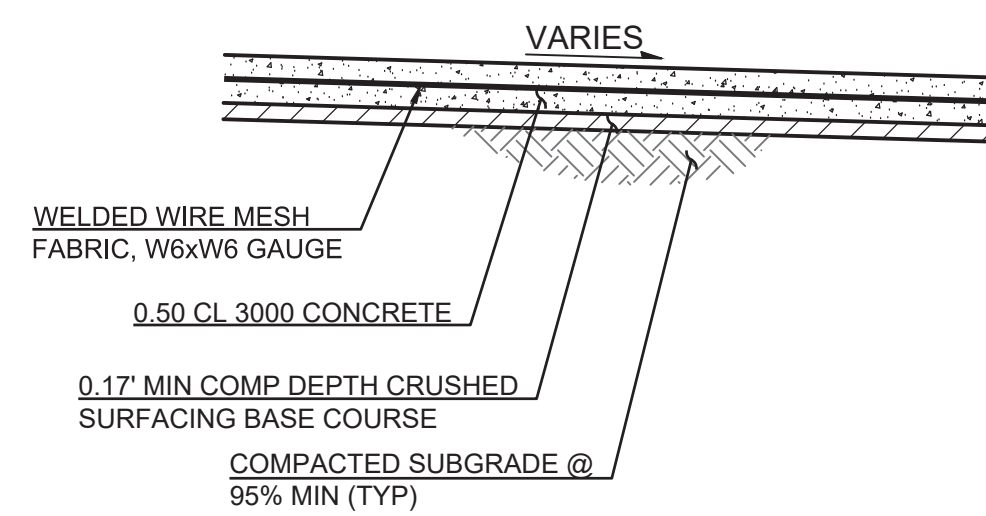
SOLID LID TO BE USED

DUCTILE IRON CASTINGS FOR PVC CATCH BASINS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A536, GRADE 70-50-05, AND SHALL MEET THE PROOF LOAD TESTING REQUIREMENTS OF AASHTO M 306.



PVC CATCH BASIN

PVC CATCH BASIN
NTS

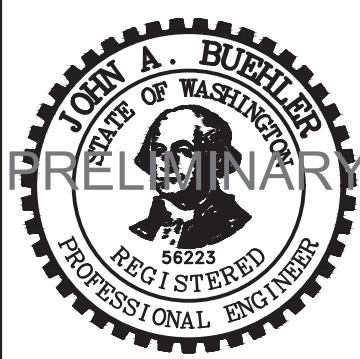


CEMENT CONC. SIDEWALK (THICKENED) SECTION
NTS

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 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON

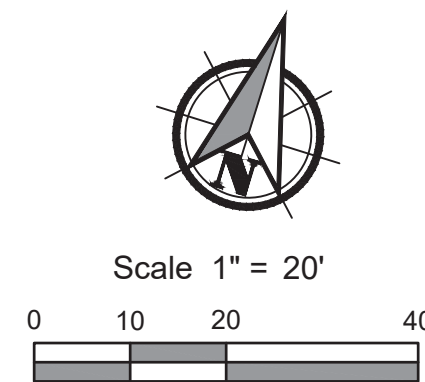
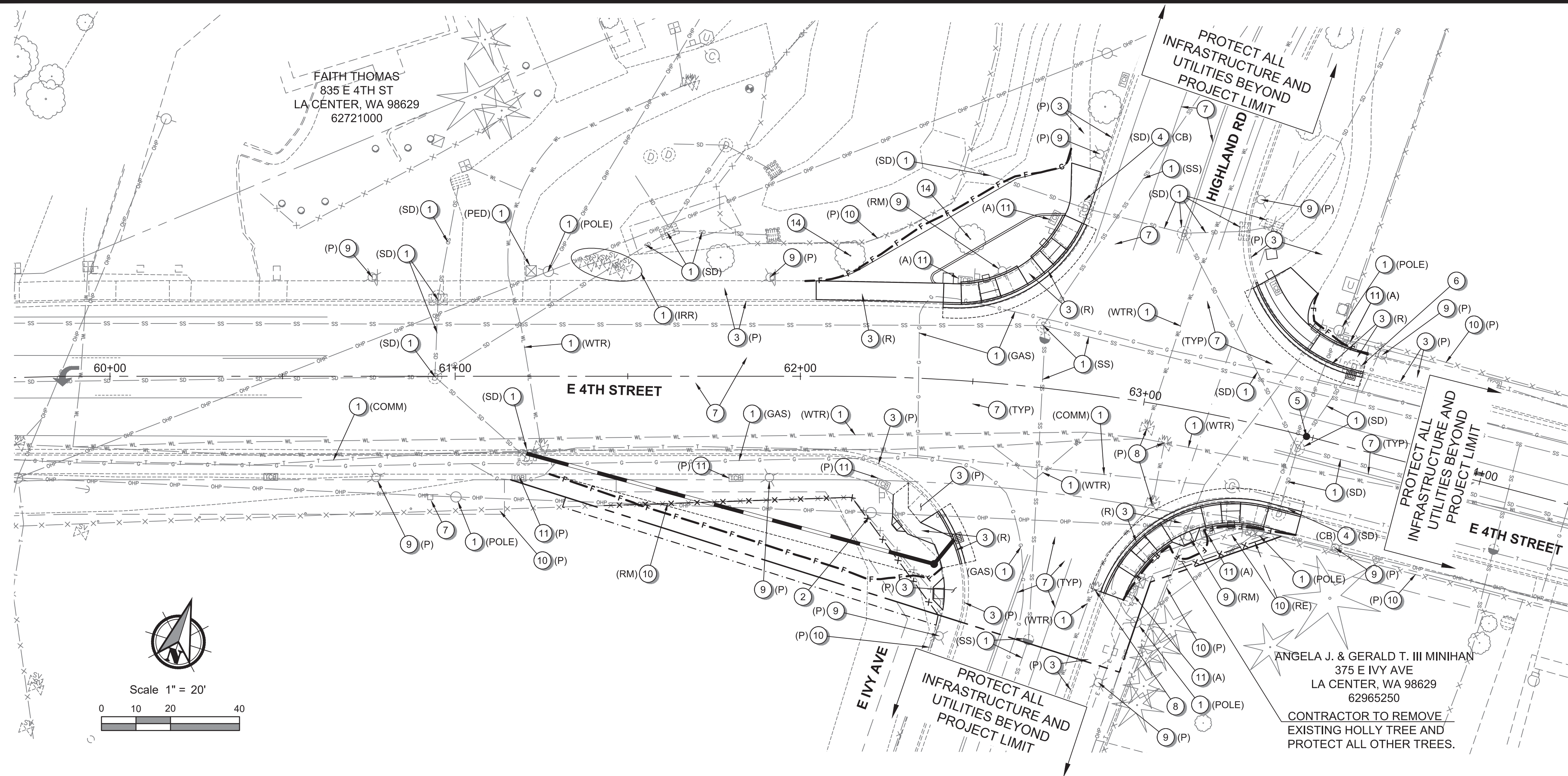


DESIGNED:
 JAB
 CHECKED:
 CMK
 MAY 2024
 71486.000

SHEET ID
D01

SHEET 6 OF 50

FINAL PLANS



GENERAL NOTES:

- SEE TREE REMOVAL PLAN SHEET ##### FOR TREE PROTECTION AND REMOVAL INFORMATION.

CONSTRUCTION NOTES:

- PROTECT EXISTING UTILITY.
- EXISTING POLE TO BE RELOCATED BY OTHERS.
- PROTECT (P) OR REMOVE (RM) EXISTING CONCRETE CURB AND SIDEWALK.
- ADJUST CATCH BASIN TO FINISHED GRADE.
- PROTECT EXISTING MONUMENT.
- REMOVE EXISTING CATCH BASIN.
- SEE SIGNING AND STRIPING PLAN FOR PROTECT/REMOVE/RELOCATE INFORMATION.
- PROTECT (P) EXISTING WATER VALVE.
- REMOVE (RM) OR PROTECT (P) EXISTING ILLUMINATION POLE.
- REMOVE (RM), PROTECT (P), OR REMOVE AND RESET (RE) EXISTING FENCE.
- PROTECT (P) OR ADJUST (A) EXISTING JUNCTION BOX.
- REMOVE EXISTING ASPHALT RAMP.
- PROTECT EXISTING CULVERT PIPE.
- REMOVE EXISTING TREE.
- RELOCATE EXISTING TRASH RECEPTACLE.

SITE PREP - ABBREVIATION LEGEND

(CB)	CATCH BASIN
(COMM)	COMMUNICATION CONDUIT/STRUCTURE
(GAS)	NORTHWEST NATURAL GAS
(IRR)	IRRIGATION
(PED)	PEDESTAL
(SD)	CITY OF LA CENTER STORM WATER
(SS)	CITY OF LA CENTER SANITARY SEWER
(WTR)	CPU WATER MAIN

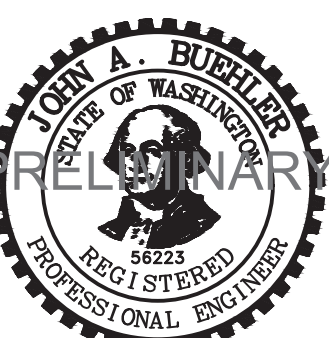
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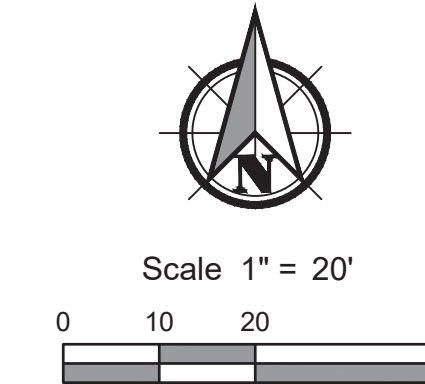
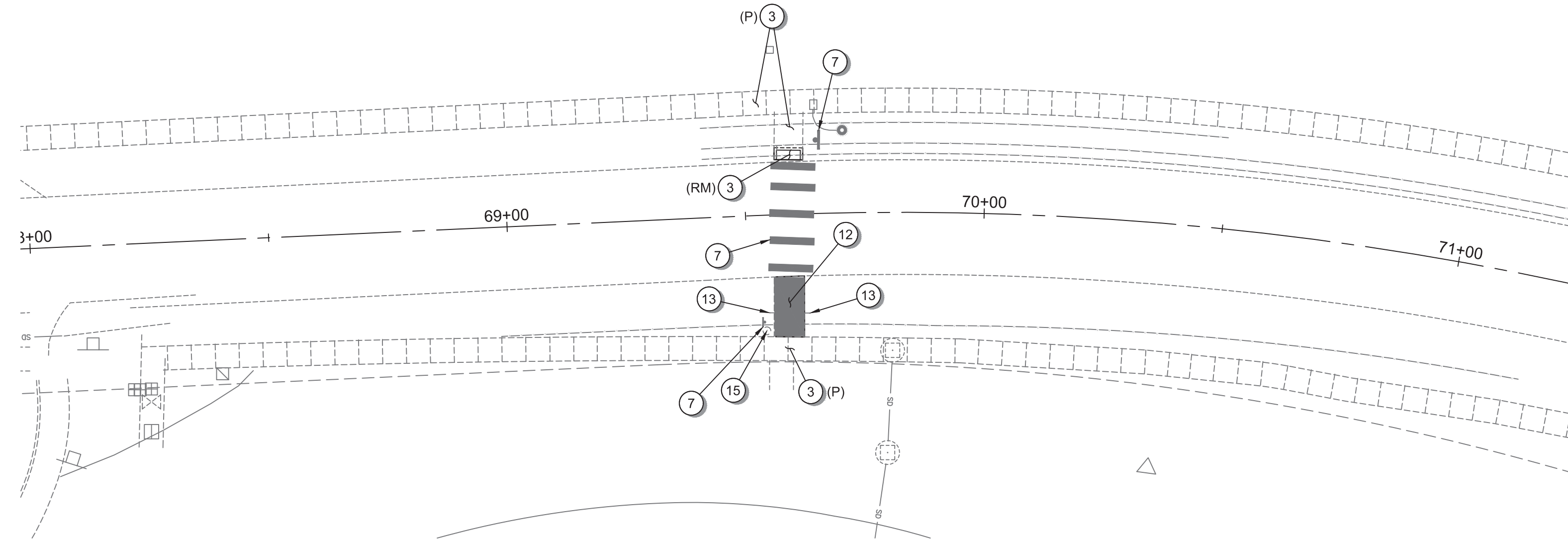
SHEET **7** OF **50**

FINAL PLANS

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 User: Tanner Scherer
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GENERAL NOTES:

- SEE TREE REMOVAL PLAN SHEET ##### FOR TREE PROTECTION AND REMOVAL INFORMATION.

CONSTRUCTION NOTES:

- PROTECT EXISTING UTILITY.
- EXISTING POLE TO BE RELOCATED BY OTHERS.
- PROTECT (P) OR REMOVE (RM) EXISTING CONCRETE CURB AND SIDEWALK.
- ADJUST CATCH BASIN TO FINISHED GRADE.
- PROTECT EXISTING MONUMENT.
- REMOVE EXISTING CATCH BASIN.
- SEE SIGNING AND STRIPING PLAN FOR PROTECT/REMOVE/RELOCATE INFORMATION.
- PROTECT (P) EXISTING WATER VALVE.
- REMOVE (RM) OR PROTECT (P) EXISTING ILLUMINATION POLE.
- REMOVE (RM), PROTECT (P), OR REMOVE AND RESET (RE) EXISTING FENCE.
- PROTECT (P) OR ADJUST (A) EXISTING JUNCTION BOX.
- REMOVE EXISTING ASPHALT RAMP.
- PROTECT EXISTING CULVERT PIPE.
- REMOVE EXISTING TREE.
- RELOCATE EXISTING TRASH RECEPTACLE.

SITE PREP - ABBREVIATION LEGEND

- (CB) CATCH BASIN
- (COMM) COMMUNICATION CONDUIT/STRUCTURE
- (GAS) NORTHWEST NATURAL GAS
- (IRR) IRRIGATION
- (PED) PEDESTAL
- (SD) CITY OF LA CENTER STORM WATER
- (SS) CITY OF LA CENTER SANITARY SEWER
- (WTR) CPU WATER MAIN

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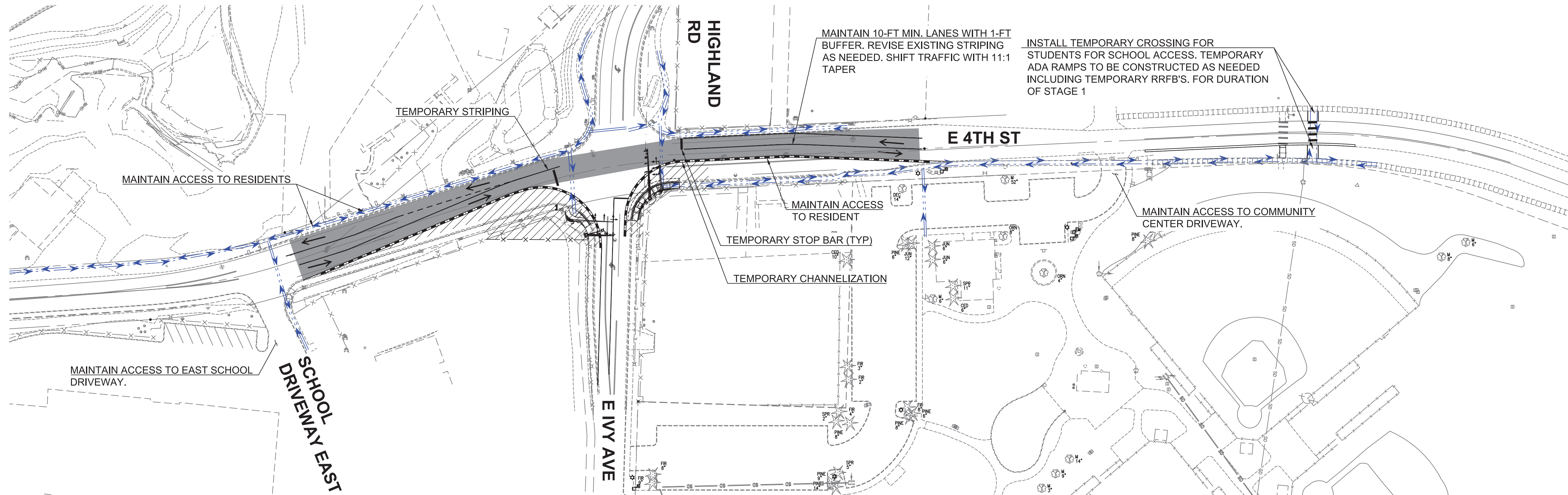
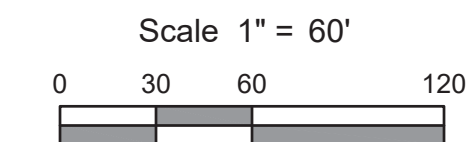
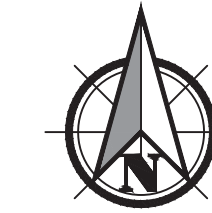
SHEET ID
SP02

SHEET **8** OF **50**

FINAL PLANS

GENERAL NOTES:

- 1) ***11:1 TAPER WHERE POSTED SPEED IS 25 MPH THROUGH STAGED CONSTRUCTION ZONES.
- 2) CONSTRUCTION ZONE SHALL BE POSTED FOR 25 MPH .
- 3) ALL CONSTRUCTION STAGING SHALL ADHERE TO WSDOT STANDARD PLANS.
- 4) TEMPORARY LONG TERM STRIPING SHALL BE REVISED FOR STAGE 1 TO SHIFT TRAFFIC TO NORTH SIDE OF E 4TH STREET ADDED AS SHOWN IN PLAN BELOW.
- 5) CONTRACTOR SHALL MAINTAIN 11' MIN. TRAVEL LANES DURING CONSTRUCTION UNLESS NOTED OTHERWISE DURING CONSTRUCTION.
- 6) WHERE CONTRACTOR BLENDS EXISTING ROAD GRADES WITH PROPOSED ROAD GRADES, THE TRANSITION SHALL BE NO STEEPER THAN 5-10%.
- 7) FOR CLASS A SIGNING, SEE CS03.
- 8) EXISTING PEDESTRIAN OR BICYCLE FACILITIES TO BE MAINTAINED THROUGHOUT CONSTRUCTION.
- 9) ALL ADJACENT ACCESSES TO BE MAINTAINED DURING CONSTRUCTION UNLESS OTHERWISE NOTED.
- 10) LIMITS OF WORK SHALL BE TO THE MAXIMUM EXTENT FEASIBLE FOR THE AREAS SHOWN WHILE NOT IMPACTING THE EXISTING ROADWAY, UNLESS NOTED OTHERWISE.
- 11) ALL PAVING COMPLETED SHALL INCLUDE BASE AND LEVELING COURSE ONLY.
- 12) CONTRACTOR TO PROVIDE LONG TERM TRAFFIC CONTROL AND PEDESTRIAN ROUTING PLANS TO WSDOT & CITY ENGINEER NO SOONER THAN 2 WEEKS PRIOR TO TRAFFIC SHIFTS.
- 13) WHEN CHANNELIZATION IS USED TO DELINEATE A PEDESTRIAN PATHWAY, A CONTINUOUS DETECTABLE EDGING SHALL BE PROVIDED THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT PEDESTRIANS USING A CANE CAN FOLLOW IT. EDGING SHALL PROTRUDE AT LEAST 6-IN ABOVE THE SURFACE OF THE PATHWAY WITH THE BOTTOM EDGING A MAXIMUM OF 2.5-IN ABOVE THE SURFACE.
- 14) PEDESTRIAN AND BICYCLE ROUTING PROVIDED IS PRELIMINARY. CONTRACTOR TO PROVIDE FINAL ACCESSIBLE PEDESTRIAN/BICYCLE CHANNELIZATION PLAN TO CITY FOR REVIEW, COMMENT AND APPROVAL PRIOR TO IMPLEMENTATION. 5-FOOT MINIMUM HARD SURFACE ACCESS ON ONE SIDE OF THE ROADWAY SHALL BE MAINTAINED AT ALL TIMES, UNLESS NOTED OTHERWISE.



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LEGEND	
	REFLECTIVE CHANNELIZATION DEVICE
	PEDESTRIAN ACCESS ROUTE
	WORK ZONE AREA
	TRAFFIC TRAVEL ZONE
	TRAFFIC FLOW DIRECTION

STAGING CONSTRUCTION SUMMARY

CONSTRUCT ALL IMPROVEMENTS IN WORK ZONE AS SHOWN ABOVE EXCEPT LANDSCAPE, STRIPING, AND FINAL LIFT OF HMA UNLESS OTHERWISE NOTED. WORK SHALL TYPICALLY INCLUDE THE FOLLOWING:

- BUILD SOUTHWEST AND SOUTHEAST CURB RETURNS AT INTERSECTION, INCLUDING SIDEWALK, CURB AND PAVEMENT.
- MAINTAIN EXISTING SIGNAL POLES DURING CONSTRUCTION.
- CONSTRUCT PROPOSED SIGNAL POLES AT THE SW AND SE CORNER AND LEAVE SIGNALS INACTIVE DURING CONSTRUCTION.
- MAINTAIN EAST SCHOOL DRIVEWAY AND COMMUNITY CENTER DRIVEWAY ACCESS.

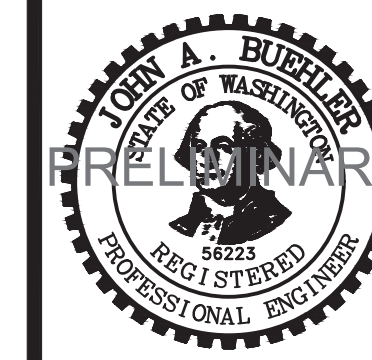
CONSTRUCTION STAGING - STAGE 1 FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL

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SHEET 9 OF 50

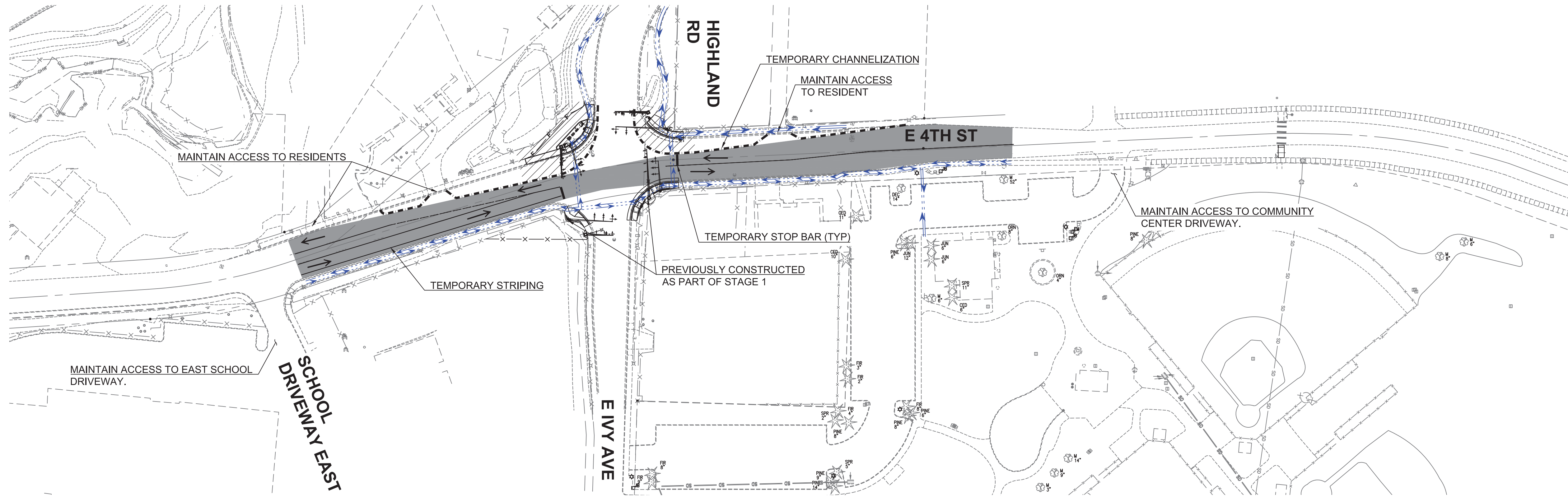
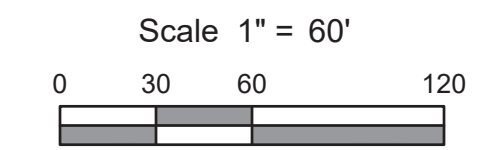
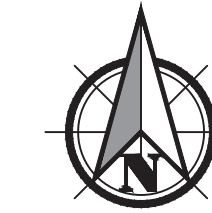
FINAL PLANS

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GENERAL NOTES:

- 1) ***11:1 TAPER WHERE POSTED SPEED IS 25 MPH THROUGH STAGED CONSTRUCTION ZONES.
- 2) CONSTRUCTION ZONE SHALL BE POSTED FOR 25 MPH .
- 3) ALL CONSTRUCTION STAGING SHALL ADHERE TO WSDOT STANDARD PLANS.
- 4) TEMPORARY LONG TERM STRIPING SHALL BE REVISED FOR STAGE 1 TO SHIFT TRAFFIC TO NORTH SIDE OF E 4TH STREET ADDED AS SHOWN IN PLAN BELOW.
- 5) CONTRACTOR SHALL MAINTAIN 11' MIN. TRAVEL LANES DURING CONSTRUCTION UNLESS NOTED OTHERWISE DURING CONSTRUCTION.
- 6) WHERE CONTRACTOR BLENDS EXISTING ROAD GRADES WITH PROPOSED ROAD GRADES, THE TRANSITION SHALL BE NO STEEPER THAN 5-10%.
- 7) FOR CLASS A SIGNING, SEE CS03.
- 8) EXISTING PEDESTRIAN OR BICYCLE FACILITIES TO BE MAINTAINED THROUGHOUT CONSTRUCTION.
- 9) ALL ADJACENT ACCESSES TO BE MAINTAINED DURING CONSTRUCTION UNLESS OTHERWISE NOTED.
- 10) LIMITS OF WORK SHALL BE TO THE MAXIMUM EXTENT FEASIBLE FOR THE AREAS SHOWN WHILE NOT IMPACTING THE EXISTING ROADWAY, UNLESS NOTED OTHERWISE.
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- 12) CONTRACTOR TO PROVIDE LONG TERM TRAFFIC CONTROL AND PEDESTRIAN ROUTING PLANS TO WSDOT & CITY ENGINEER NO SOONER THAN 2 WEEKS PRIOR TO TRAFFIC SHIFTS.
- 13) WHEN CHANNELIZATION IS USED TO DELINEATE A PEDESTRIAN PATHWAY, A CONTINUOUS DETECTABLE EDGING SHALL BE PROVIDED THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT PEDESTRIANS USING A CANE CAN FOLLOW IT. EDGING SHALL PROTRUDE AT LEAST 6-IN ABOVE THE SURFACE OF THE PATHWAY WITH THE BOTTOM EDGING A MAXIMUM OF 2.5-IN ABOVE THE SURFACE.
- 14) PEDESTRIAN AND BICYCLE ROUTING PROVIDED IS PRELIMINARY. CONTRACTOR TO PROVIDE FINAL ACCESSIBLE PEDESTRIAN/BICYCLE CHANNELIZATION PLAN TO CITY FOR REVIEW, COMMENT AND APPROVAL PRIOR TO IMPLEMENTATION. 5-FOOT MINIMUM HARD SURFACE ACCESS ON ONE SIDE OF THE ROADWAY SHALL BE MAINTAINED AT ALL TIMES, UNLESS NOTED OTHERWISE.



LEGEND	
	REFLECTIVE CHANNELIZATION DEVICE
	PEDESTRIAN ACCESS ROUTE
	WORK ZONE AREA
	TRAFFIC TRAVEL ZONE
	TRAFFIC FLOW DIRECTION

STAGING CONSTRUCTION SUMMARY

CONSTRUCT ALL IMPROVEMENTS IN WORK ZONE AS SHOWN ABOVE EXCEPT LANDSCAPE, STRIPING, AND FINAL LIFT OF HMA UNLESS OTHERWISE NOTED. WORK SHALL TYPICALLY INCLUDE THE FOLLOWING:

- BUILD NORTHWEST AND NORTHEAST CURB RETURNS AT INTERSECTION, INCLUDING SIDEWALK, CURB AND PAVEMENT.
- MAINTAIN EXISTING SIGNAL POLES DURING CONSTRUCTION.
- CONSTRUCT PROPOSED SIGNAL POLES AT THE NW AND NE CORNER AND LEAVE SIGNALS INACTIVE DURING CONSTRUCTION.
- MAINTAIN EAST SCHOOL DRIVEWAY AND COMMUNITY CENTER DRIVEWAY ACCESS.

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**CONSTRUCTION STAGING - STAGE 2 FOR:
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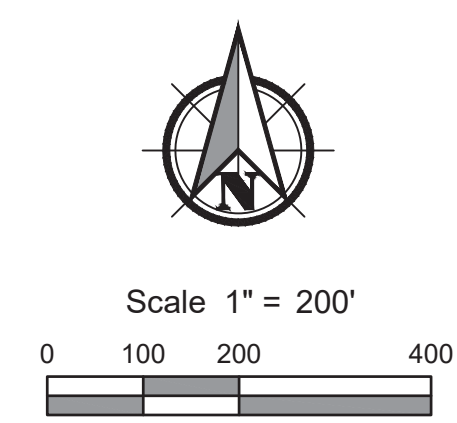
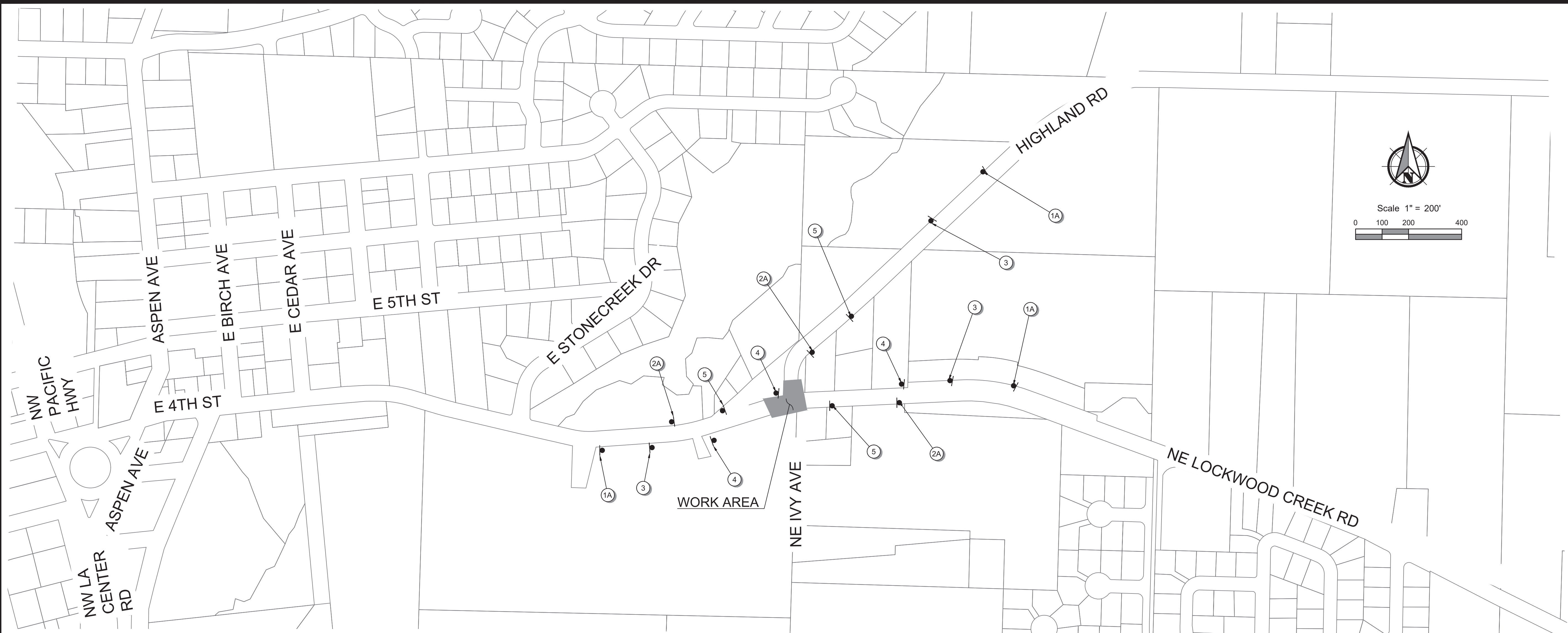
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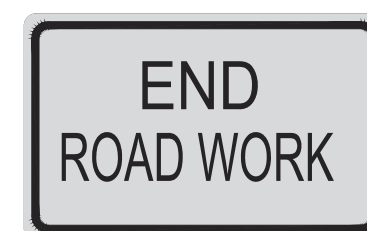
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FINAL PLANS

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1A
W20-1
36" x 36"



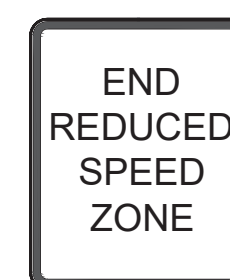
2A
G20-2
36" x 18"



3
W3-5
36" x 36"



4
R2-1
30" x 36"



5
CUSTOM SIGN
36" x 48"

CLASS A CONSTRUCTION SIGNS

 36" x 36" W21-801	INCLUDE THIS SIGN WITH THE MOTORCYCLE CAUTION SIGN WHEN THERE IS AN ABRUPT LANE EDGE	 36" x 36" W8-15	INCLUDE THIS SIGN WITH THE MOTORCYCLE CAUTION SIGN WHEN THE PAVEMENT IS GROOVED	 36" x 36" W21-1701	WAC 468-95-306 & RCW 47.36.200 SIGN FOR COMPLIANCE WITH CURRENT LAW.
 36" x 36" W8-7	INCLUDE THIS SIGN WITH THE MOTORCYCLE CAUTION SIGN WHEN THERE IS LOOSE GRAVEL ON THE ROAD	 36" x 36" W8-24	INCLUDE THIS SIGN WITH THE MOTORCYCLE CAUTION SIGN WHEN THE STEEL PLATES ARE ON THE ROAD	USE OF THE "MOTORCYCLES USE EXTREME CAUTION" SIGN SHALL ONLY BE USED WHEN THE FOLLOWING CONDITIONS ARE PRESENT: <ul style="list-style-type: none"> GROOVED PAVEMENT ABRUPT LANE EDGES STEEL PLATES GRAVEL OR EARTH ON ROADWAY SURFACES SUPPLEMENTAL SIGNS SHALL BE ADDED IN ADDITION TO THE "MOTORCYCLES USE EXTREME CAUTION" SIGN WHEN CERTAIN ROADWAY CONDITIONS ARE PRESENT. SEE BELOW.	

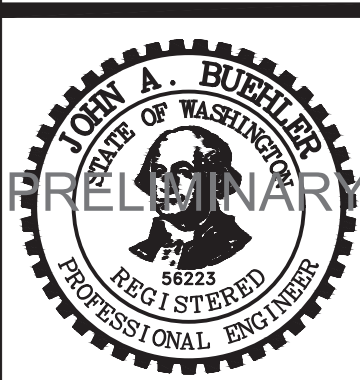
GENERAL TCP NOTES

- ALL LOCATIONS APPROXIMATE.
- SIGNS SHALL BE ORANGE WITH BLACK LEGEND, UNLESS NOTED OTHERWISE.
- SPEED LIMIT REDUCTIONS WILL BE A CONTINUOUS REGULATORY REDUCTION BUT WILL NOT BE IMPLEMENTED UNTIL IT IS NEEDED ON EACH HIGHWAY. IF THERE IS MINIMAL WORK OCCURRING THAT AFFECTS TRAFFIC AT THE START OF THE PROJECT, THE TEMPORARY SIGNS INSTALLED FOR THE SPEED REDUCTION SHALL BE COVERED UNTIL THE NEED FOR THE SPEED LIMIT REDUCTION IS REQUIRED. SPEED RADAR TRAILERS MAY BE DEPLOYED DURING THIS TIME, BUT SPEED LIMIT SIGNS (R2-1) POSTED ON TRAILERS SHALL BE COVERED UNTIL SPEED LIMIT REDUCTION IS REQUIRED.
- CONTRACTOR SHALL PROVIDE NO LESS THAN 2 WEEKS NOTICE TO WSDOT PRIOR TO INTENT ON IMPLEMENTATION OF TEMPORARY SPEED LIMIT REDUCTION.
- SPEED LIMIT REDUCTION SIGNING SHALL BE IMPLEMENTED ONLY WHEN WORK CONDITIONS REQUIRE CONTRACTOR'S USE OF EXISTING LANES FOR VEHICLE STAGING TO COMPLETE WIDENING WORK OR WHEN WORK FOR ISLANDS IS STARTED (WHICHEVER COMES FIRST).

LEGEND

▲ CLASS A SIGN

CLASS A SIGNING FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



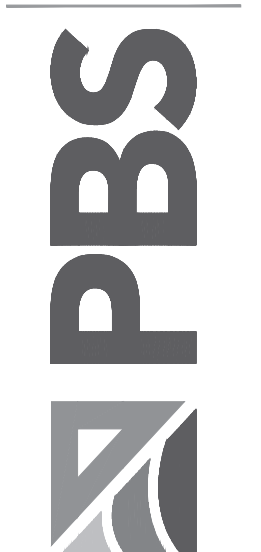
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SHEET 11 OF 50

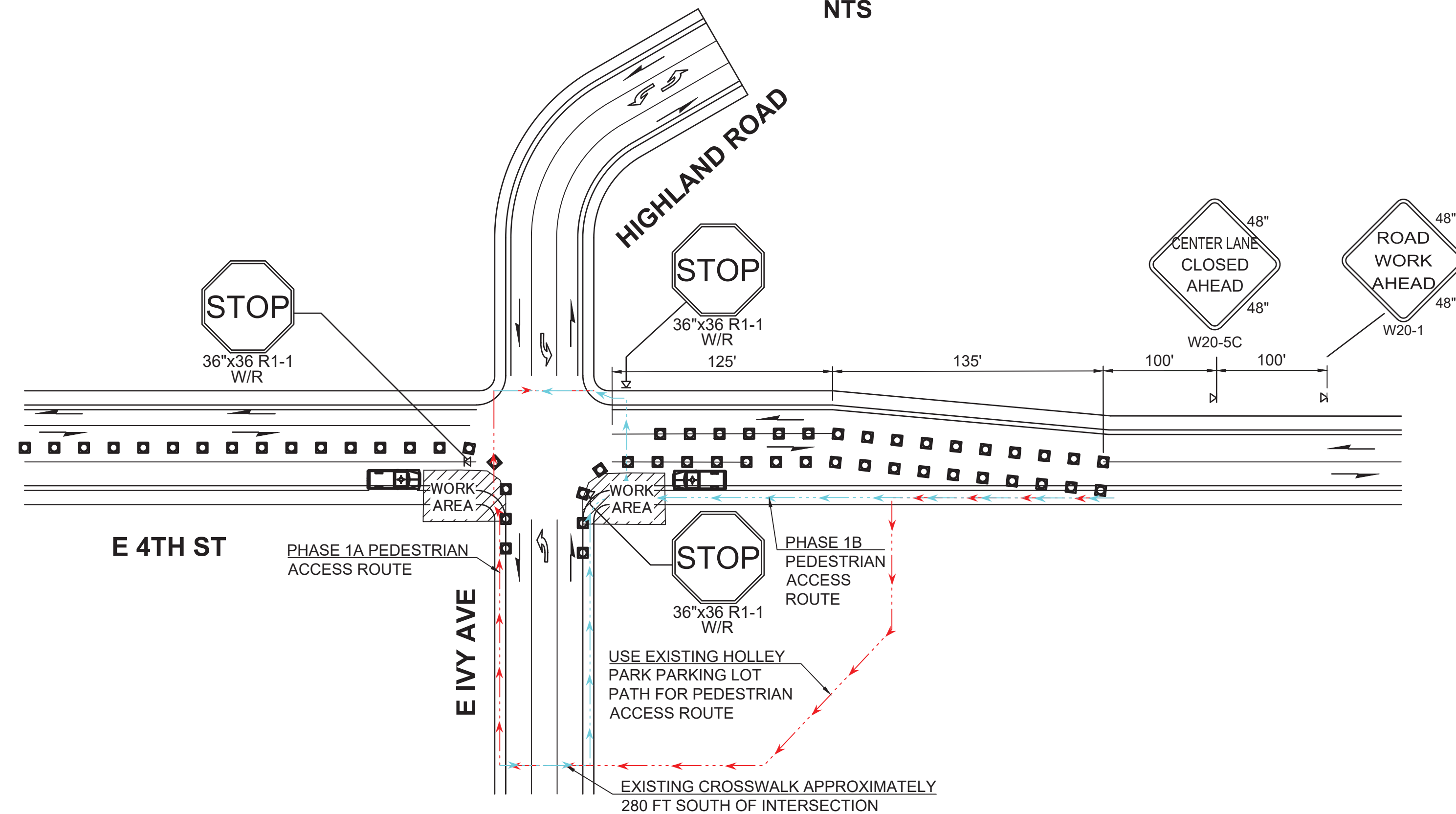
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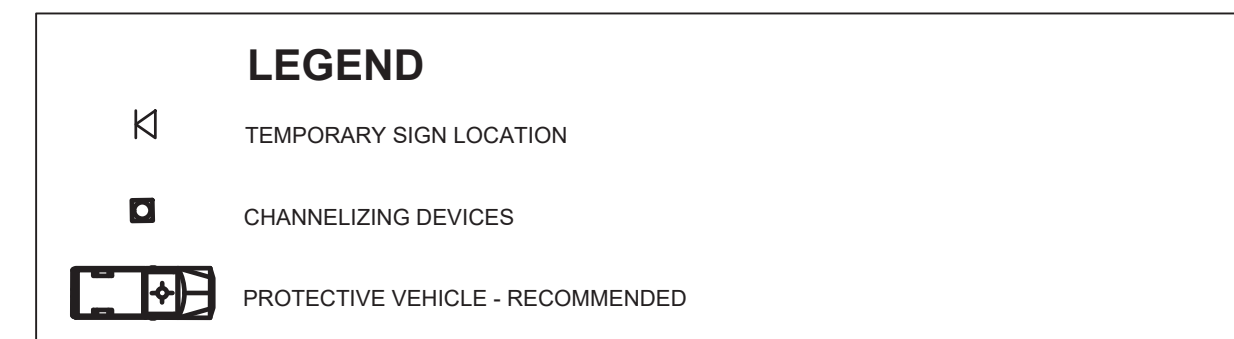
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INTERSECTION LANE CLOSURE - PHASE 1 NTS

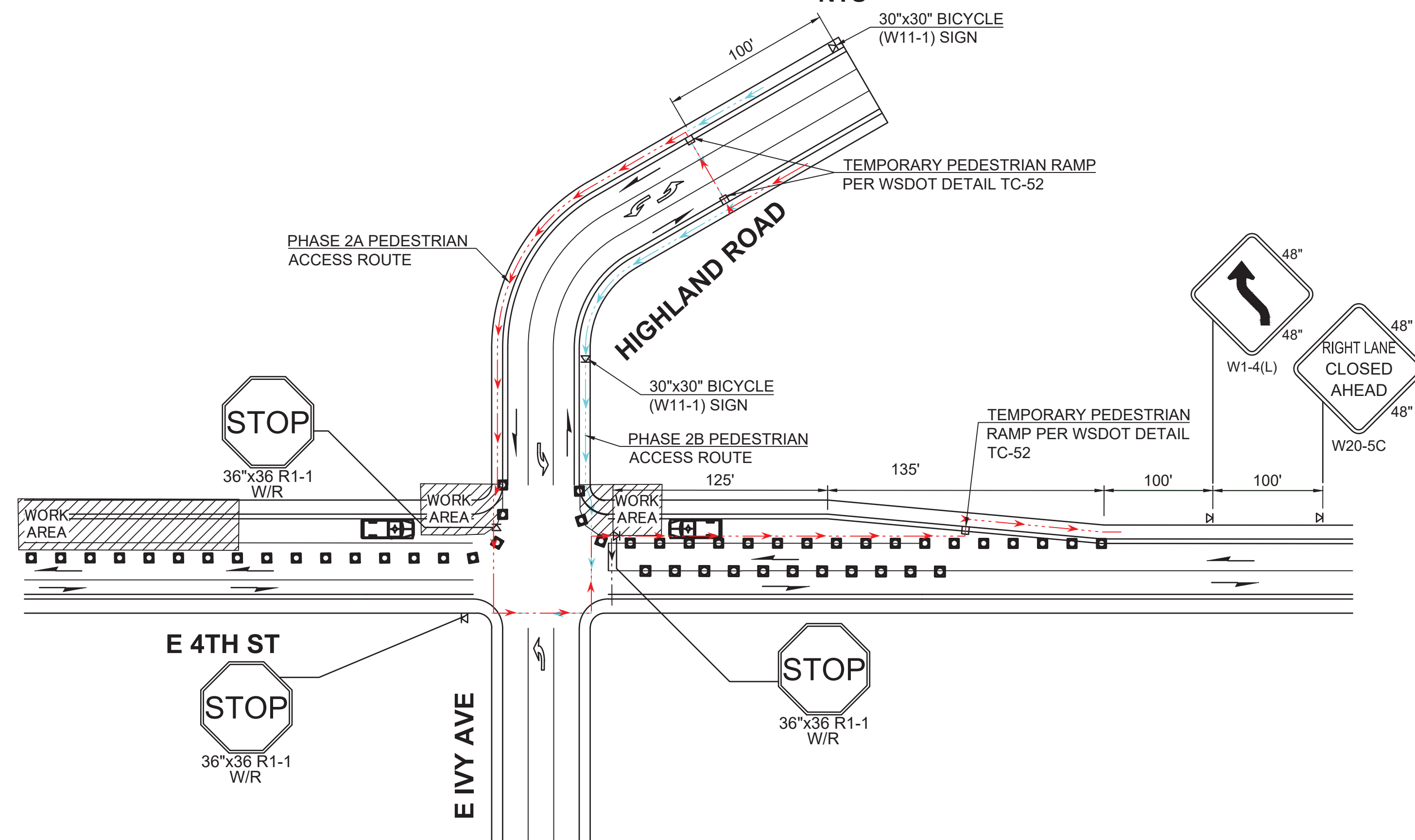


NOTES:

1. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
2. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
3. STOP SIGNS (R1-1) ON HIGHLAND ROAD AND E IVY AVE TO BE TEMPORARILY RELOCATED TO PROVIDE ADEQUATE SITE DISTANCE AT INTERSECTION.



INTERSECTION LANE CLOSURE - PHASE 2 NTS



LANE WIDTH (feet)	MINIMUM TAPER LENGTH = L (feet)									
	Posted Speed (mph)									
11	25	30	35	40	45	50	55	60	65	70
	115	165	225	295	495	550	605	660	-	-

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
25/30	20	40

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	100' (2)

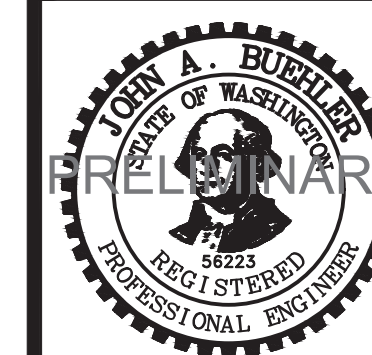
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

INTERSECTION TRAFFIC CONTROL PLANS FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL

A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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 CHECKED: CMK
 MAY 2024
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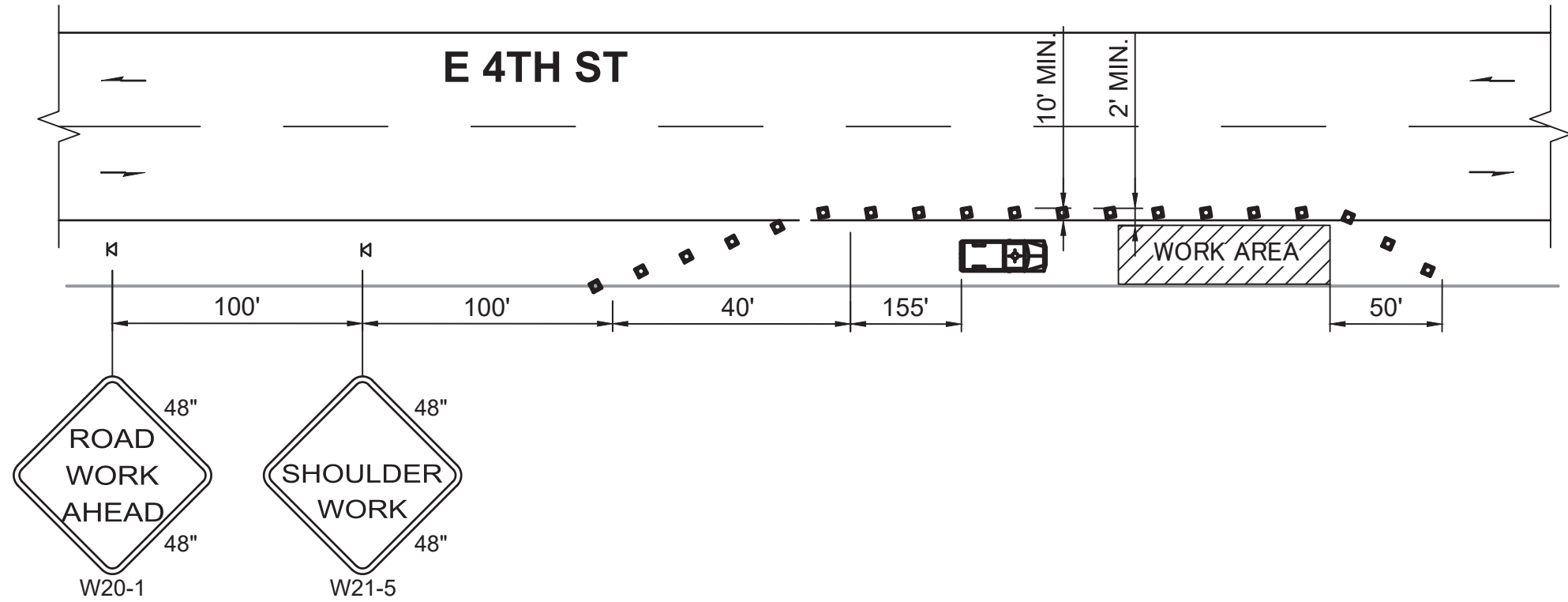
SHEET ID
TC01

SHEET 12 OF 50

FINAL PLANS



SHOULDER CLOSURE - PHASE 1 NTS



- NOTES:
1. DEVISE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20FT.
 2. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.

LEGEND

⊞ TEMPORARY SIGN LOCATION

▣ CHANNELIZING DEVICES

PROTECTIVE VEHICLE - RECOMMENDED

MINIMUM TAPER LENGTH = L (feet)										
LANE WIDTH (feet)	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
11	115	165	225	295	495	550	605	660	-	-

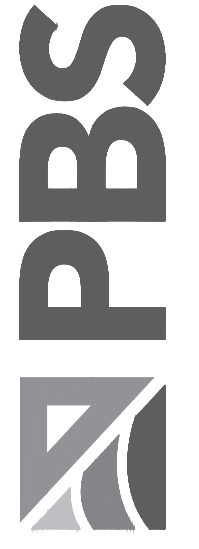
CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
25/30	20	40

SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LESS	100' (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

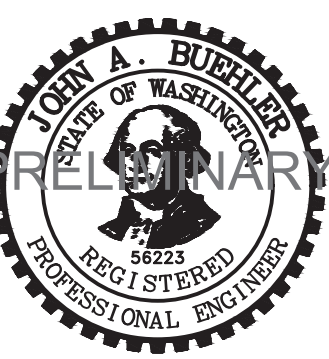
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SHOULDER TRAFFIC CONTROL PLAN FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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DESIGNED:
JAB

CHECKED:
CMK

MAY 2024
71486.000

SHEET ID
TC02

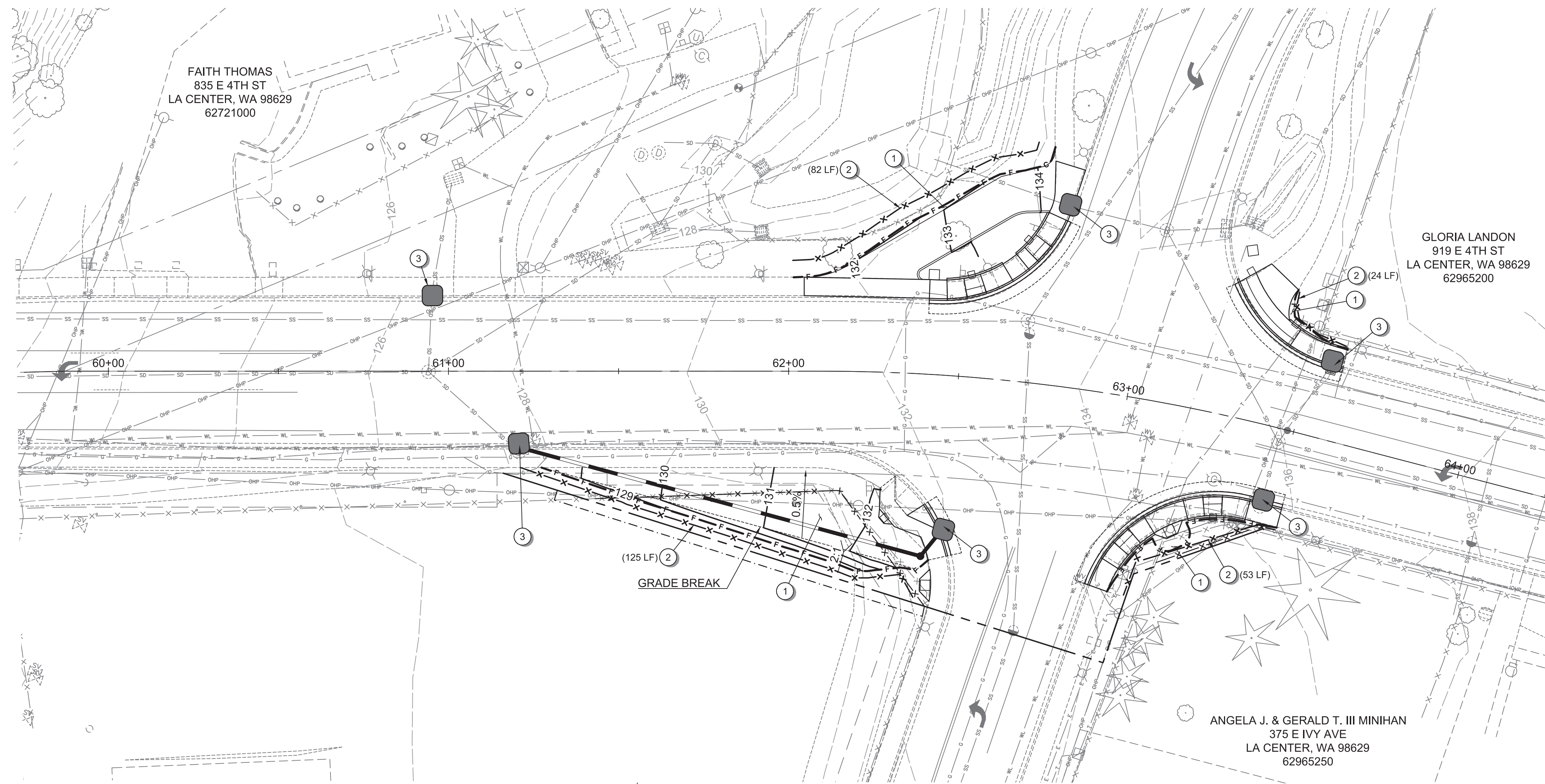
SHEET **13** OF **50**

FINAL PLANS

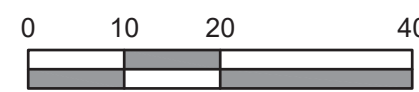
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Scale 1" = 20'



GENERAL NOTES

1. SEE SHEET G02 AND G03 FOR LEGEND AND GENERAL NOTES

CONSTRUCTION NOTES:

- ① CUT AND FILL SLOPES AND DISTURBED AREAS OUTSIDE OF PROPOSED CONSTRUCTION SHALL BE RESTORED.
- ② INSTALL SILT FENCE PER WSDOT STANDARD PLAN I-30.15
- ③ INSTALL STORM DRAIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20

LEGEND:

- EXISTING CONTOUR 410
- SLIT FENCE
- INLET PROTECTION

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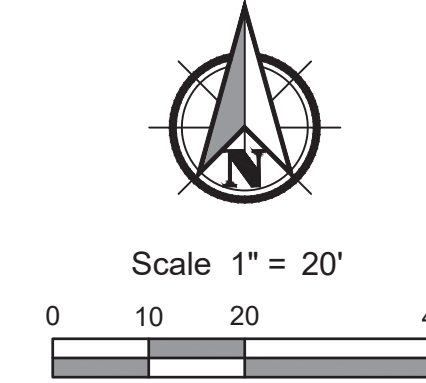
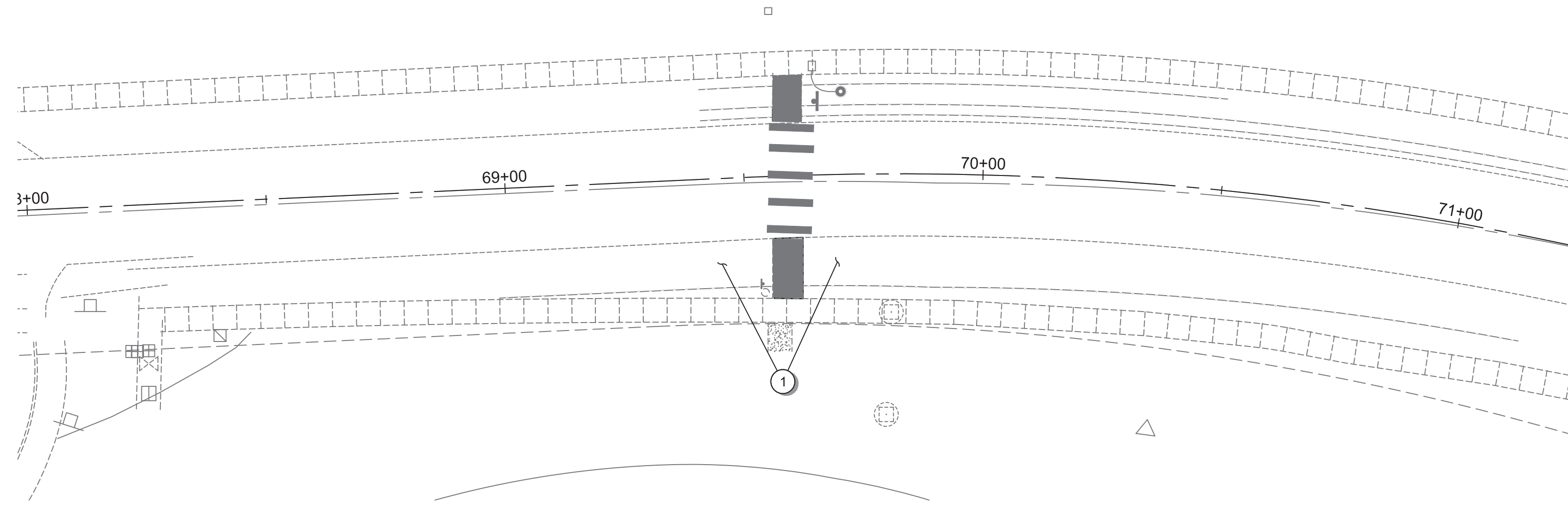
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EC01

SHEET **14** OF **50**

FINAL PLANS

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GENERAL NOTES

1. SEE SHEET G02 AND G03 FOR LEGEND AND GENERAL NOTES

CONSTRUCTION NOTES:

- ① CUT AND FILL SLOPES AND DISTURBED AREAS OUTSIDE OF PROPOSED CONSTRUCTION AREAS SHALL BE RESTORED.
- ② INSTALL SILT FENCE PER WSDOT STANDARD PLAN I-30.15
- ③ INSTALL STORM DRAIN INLET PROTECTION PER WSDOT STANDARD PLAN I-40.20

LEGEND:

- EXISTING CONTOUR - - - - - 410 - - - - -
- SLIT FENCE - x - x - x - x - x - x -
- INLET PROTECTION [Solid black circle]

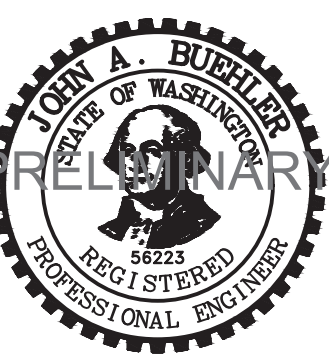
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**GRADING & EROSION CONTROL FOR:
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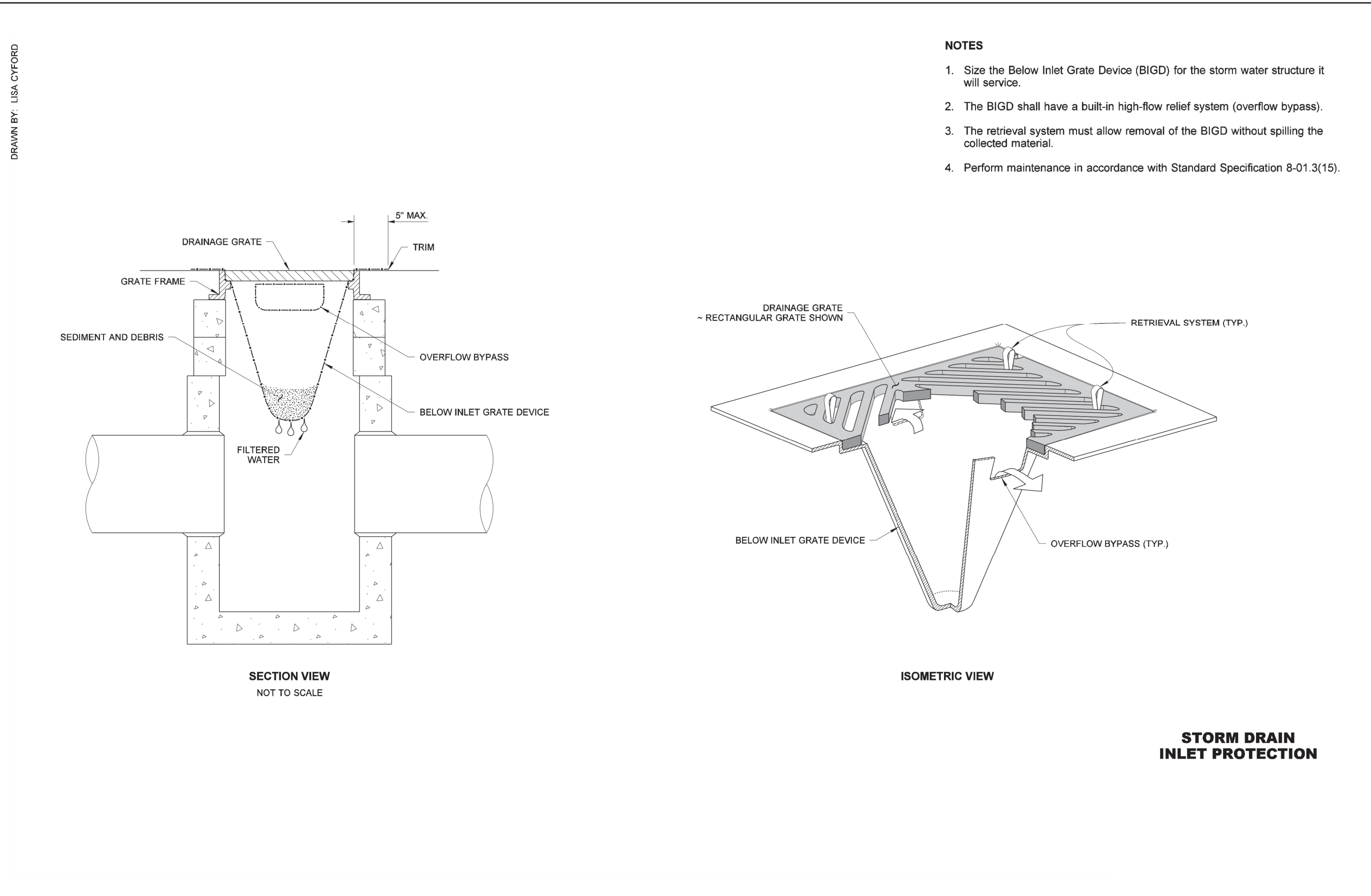
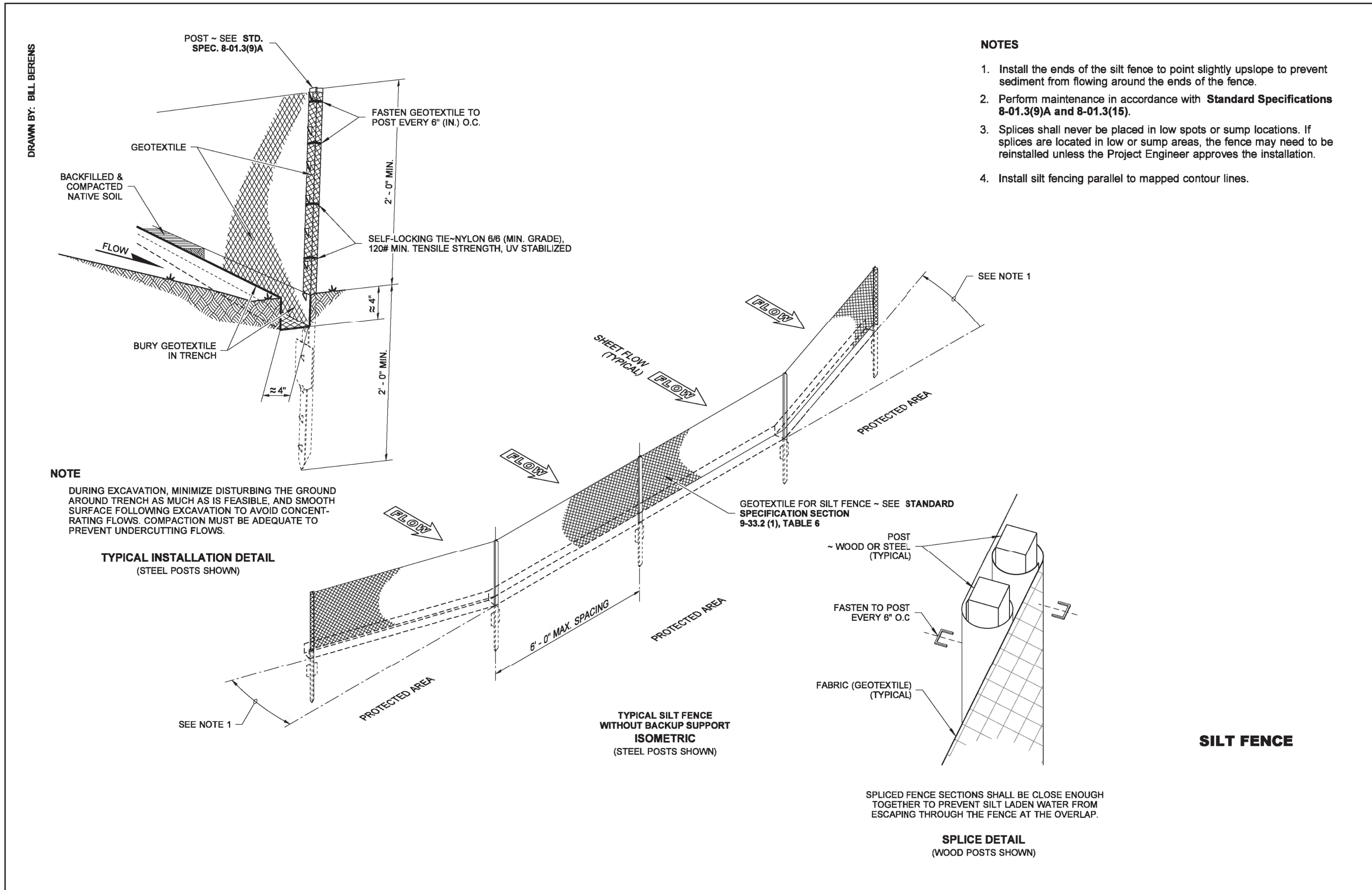
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SHEET ID
EC02

SHEET **15** OF **50**

FINAL PLANS

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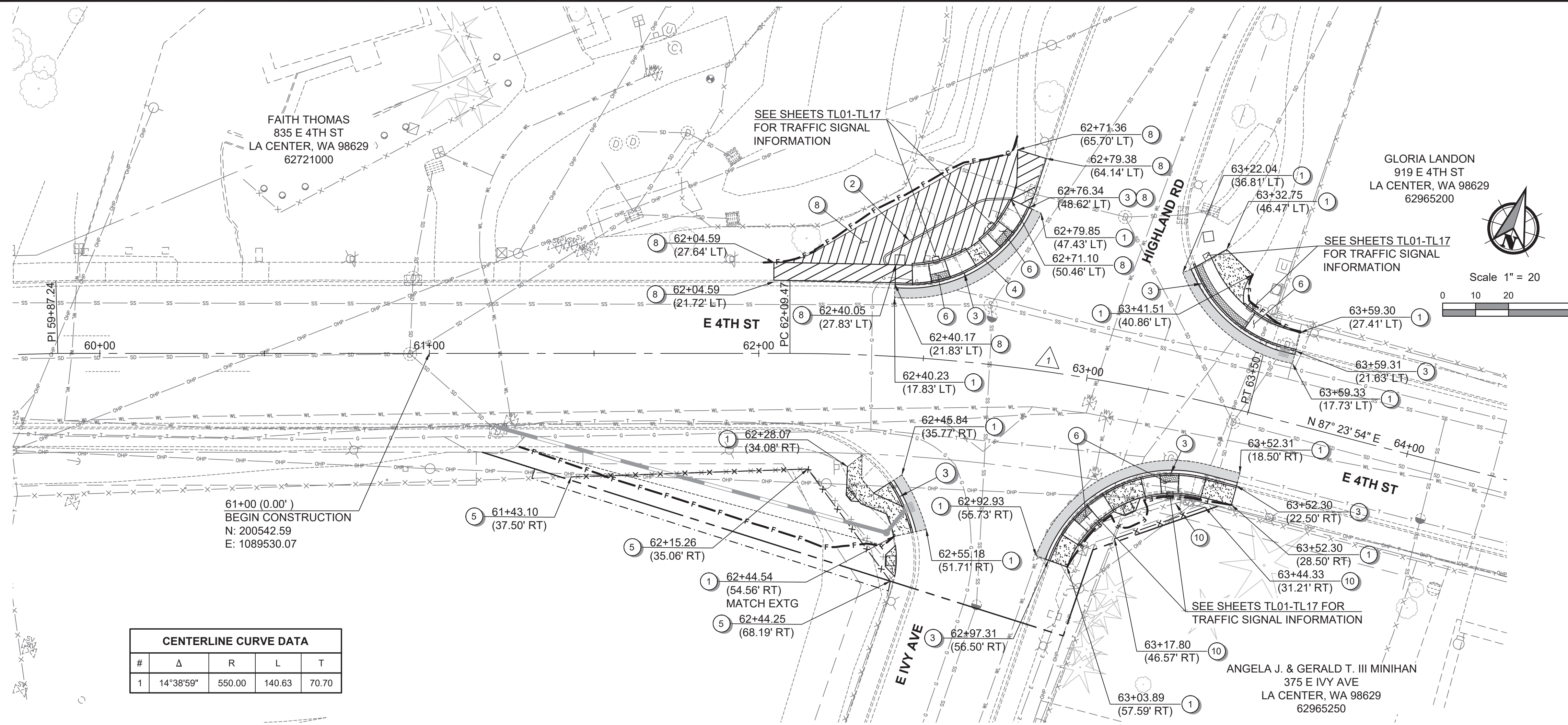
DESIGNED:
JAB
CHECKED:
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MAY 2024
71486.000

SHEET ID
EC03

SHEET **16** OF **50**

FINAL PLANS

File name: L:\Projects\71000171486\71486-000\Civil\CAD\Working\Sheets\Signal Plans\71486-000-C01-02.dwg User: Tamer Sahar CAD Plot Date/Time: 5/6/2024 4:42:16 PM



CENTERLINE CURVE DATA				
#	Δ	R	L	T
1	14°38'59"	550.00	140.63	70.70

CONSTRUCTION NOTES:

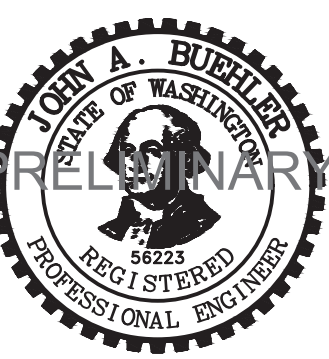
- GENERAL NOTES:**
- SEE TYPICAL SECTIONS SHEET TS01 FOR ADDITIONAL INFORMATION.
 - TREES TO BE REMOVED NOTED ON TR01-TR02 HAVE BEEN REMOVED FOR PLAN CLARITY.

- STREET NOTES:**
- SAWCUT EXISTING HMA, CURB, AND/OR SIDEWALK, AND MATCH EXISTING.
 - CONSTRUCT CEMENT CONCRETE TRAFFIC CURB. SEE WSDOT STANDARD PLAN F-10.12, SEE SHEET STD01.
 - CONSTRUCT CEMENT CONCRETE TRAFFIC CURB & GUTTER. SEE WSDOT STANDARD PLAN F-10.12, SEE SHEET STD01.
 - CONSTRUCT CEMENT CONCRETE SIDEWALK. SEE WSDOT STANDARD PLAN F-30.10, SEE SHEET STD01.
 - SITE SPECIFIC CHAIN LINK FENCE TYPE 4 PER WSDOT STANDARD PLAN L-20.10 WITH BLACK VINYL COATED FENCE FABRIC, BLACK PAINTED POSTS AND HARDWARE. USE 2 1/2" NOMINAL DIAMETER, SCHEDULE 40, PIPE SECTIONS FOR ALL END, CORNER, LINE, BRACE, OR PULL POSTS. MAXIMUM POST SPACING SHALL BE 6'-0" O.C., SEE SHEET STD02.
 - CEMENT CONCRETE PARALLEL CURB RAMP PER WSDOT STANDARD PLAN F-40.12, SEE SHEET STD01 FOR INFORMATION. SEE SHEET (GR01) FOR GRADING INFORMATION.
 - CEMENT CONCRETE PERPENDICULAR CURB RAMP PER WSDOT STANDARD PLAN F-40.15, SEE SHEET STD02 FOR INFORMATION. SEE SHEET (GR02) FOR GRADING INFORMATION.
 - CEMENT CONC. SIDEWALK (THICKENED) PER DETAIL, SEE SHEET D01.
 - INSTALL DETECTABLE WARNING SURFACE AND RECONSTRUCT EXISTING CONCRETE RAMP TO FULL WIDTH
 - REMOVE AND RESET EXISTING FENCE 1-2FT IN FRONT OF RIGHT OF WAY LINE. CONNECT TO EXISTING FENCE POST AND REPLACE FENCE POSTS AS NEEDED. ALL WORK TO BE WITHIN RIGHT OF WAY. FENCE SHALL MAINTAIN THE SAME HEIGHT AS EXISTING FENCE.

HATCHING LEGEND

	NEW PAVED ROADWAY AREA
	NEW CONCRETE AREA
	CEMENT CONCRETE SIDEWALK (THICKENED)

4TH STREET - STREET PLAN FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



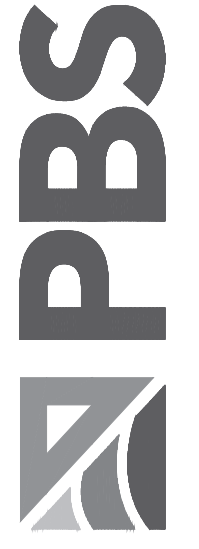
DESIGNED:
 JAB
 CHECKED:
 CMK
 MAY 2024
 71486.000

SHEET ID
C01

SHEET 17 OF 50

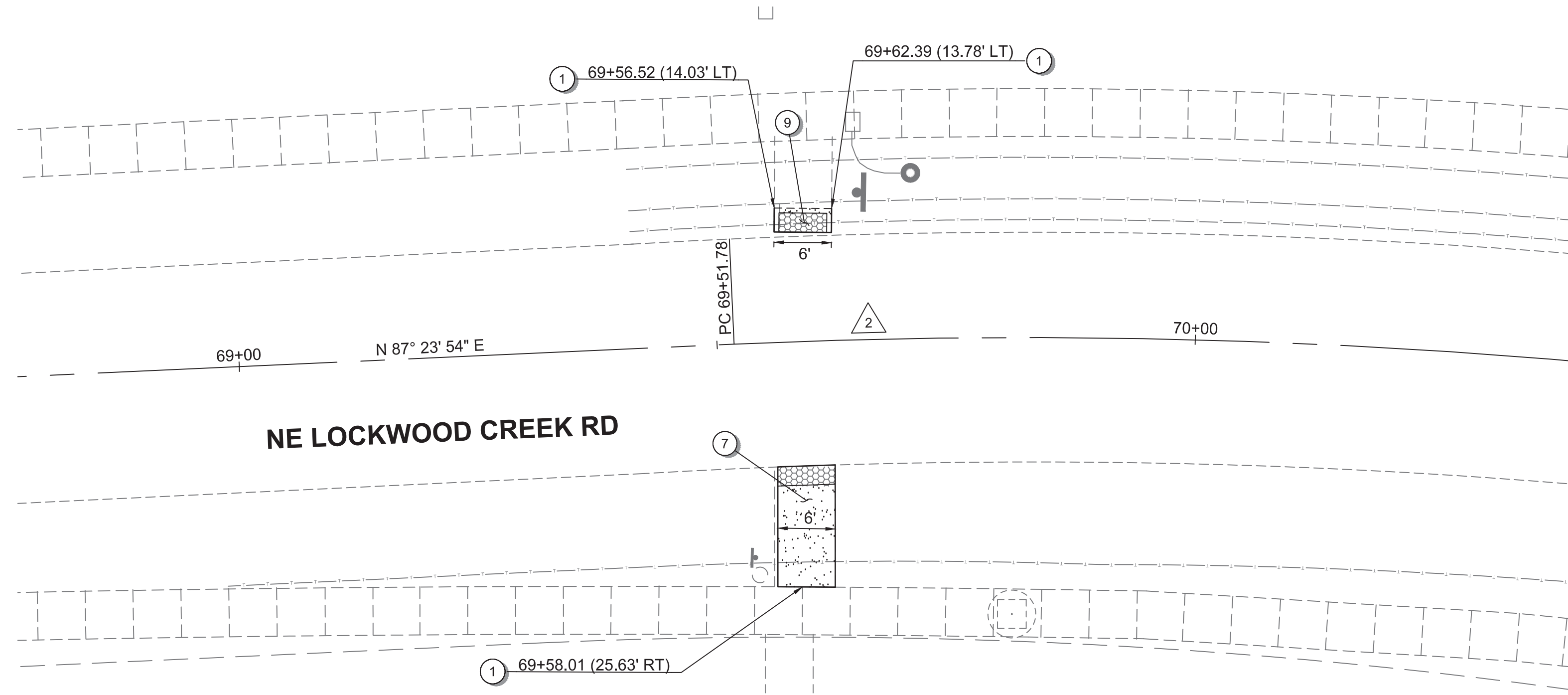
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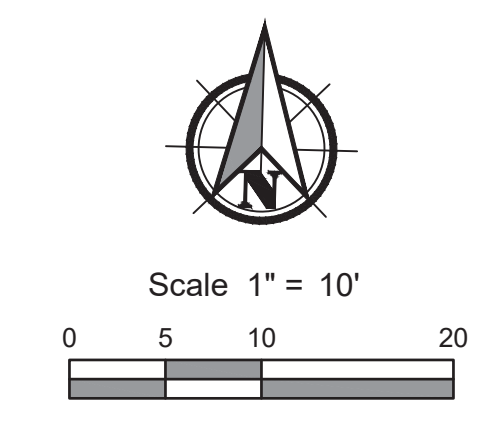
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HATCHING LEGEND

	NEW PAVED ROADWAY AREA
	NEW CONCRETE AREA
	CEMENT CONCRETE SIDEWALK (THICKENED)



CENTERLINE CURVE DATA

#	Δ	R	L	T
2	22°51'18"	670.00	267.26	135.43

CONSTRUCTION NOTES:

GENERAL NOTES:

- SEE TYPICAL SECTIONS SHEET TS01 FOR ADDITIONAL INFORMATION.
- TREES TO BE REMOVED NOTED ON TR01-TR02 HAVE BEEN REMOVED FOR PLAN CLARITY.

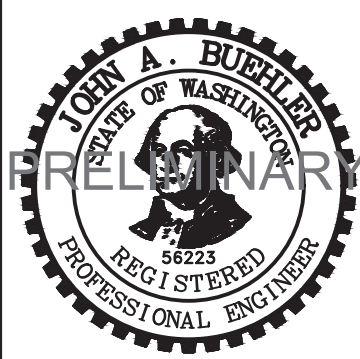
STREET NOTES:

- SAWCUT EXISTING HMA, CURB, AND/OR SIDEWALK, AND MATCH EXISTING.
- CONSTRUCT CEMENT CONCRETE TRAFFIC CURB. SEE WSDOT STANDARD PLAN F-10.12, SEE SHEET STD01.
- CONSTRUCT CEMENT CONCRETE TRAFFIC CURB & GUTTER. SEE WSDOT STANDARD PLAN F-10.12, SEE SHEET STD01.
- CONSTRUCT CEMENT CONCRETE SIDEWALK. SEE WSDOT STANDARD PLAN F-30.10, SEE SHEET STD01.
- SITE SPECIFIC CHAIN LINK FENCE TYPE 4 PER WSDOT STANDARD PLAN L-20.10 WITH BLACK VINYL COATED FENCE FABRIC, BLACK PAINTED POSTS AND HARDWARE. USE 2 1/2" NOMINAL DIAMETER, SCHEDULE 40, PIPE SECTIONS FOR ALL END, CORNER, LINE, BRACE, OR PULL POSTS. MAXIMUM POST SPACING SHALL BE 6'-0" O.C., SEE SHEET STD02.
- CEMENT CONCRETE PARALLEL CURB RAMP PER WSDOT STANDARD PLAN F-40.12, SEE SHEET STD01 FOR INFORMATION. SEE SHEET (GR01) FOR GRADING INFORMATION.
- CEMENT CONCRETE PERPENDICULAR CURB RAMP PER WSDOT STANDARD PLAN F-40.15, SEE SHEET STD02 FOR INFORMATION. SEE SHEET (GR02) FOR GRADING INFORMATION.
- CEMENT CONC. SIDEWALK (THICKENED) PER DETAIL, SEE SHEET D01.
- INSTALL DETECTABLE WARNING SURFACE AND RECONSTRUCT EXISTING CONCRETE RAMP TO FULL WIDTH
- REMOVE AND RESET EXISTING FENCE 1-2FT IN FRONT OF RIGHT OF WAY LINE. CONNECT TO EXISTING FENCE POST AND REPLACE FENCE POSTS AS NEEDED. ALL WORK TO BE WITHIN RIGHT OF WAY. FENCE SHALL MAINTAIN THE SAME HEIGHT AS EXISTING FENCE.

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4TH STREET - STREET PLAN FOR:
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A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



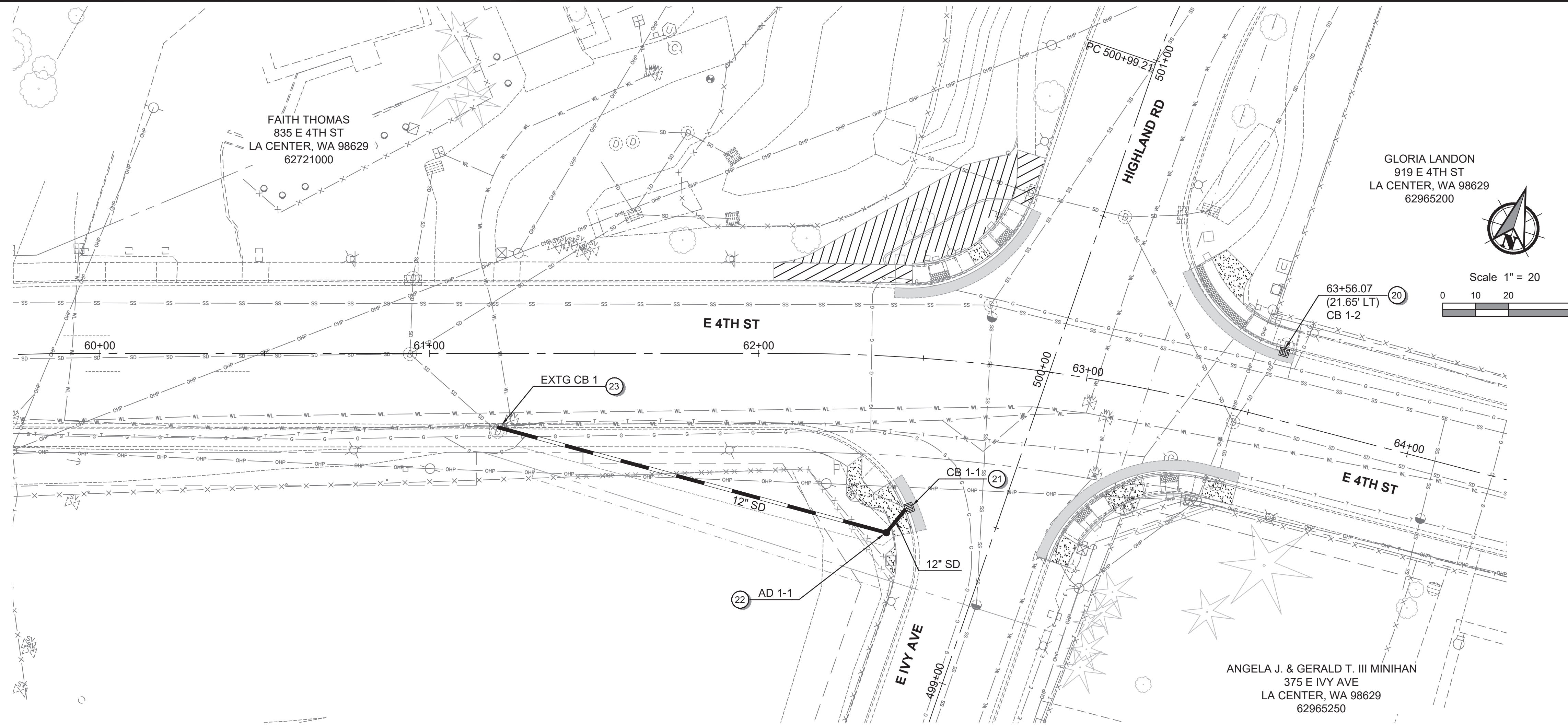
DESIGNED:
JAB
CHECKED:
CMK
MAY 2024
71486.000

SHEET ID
C02

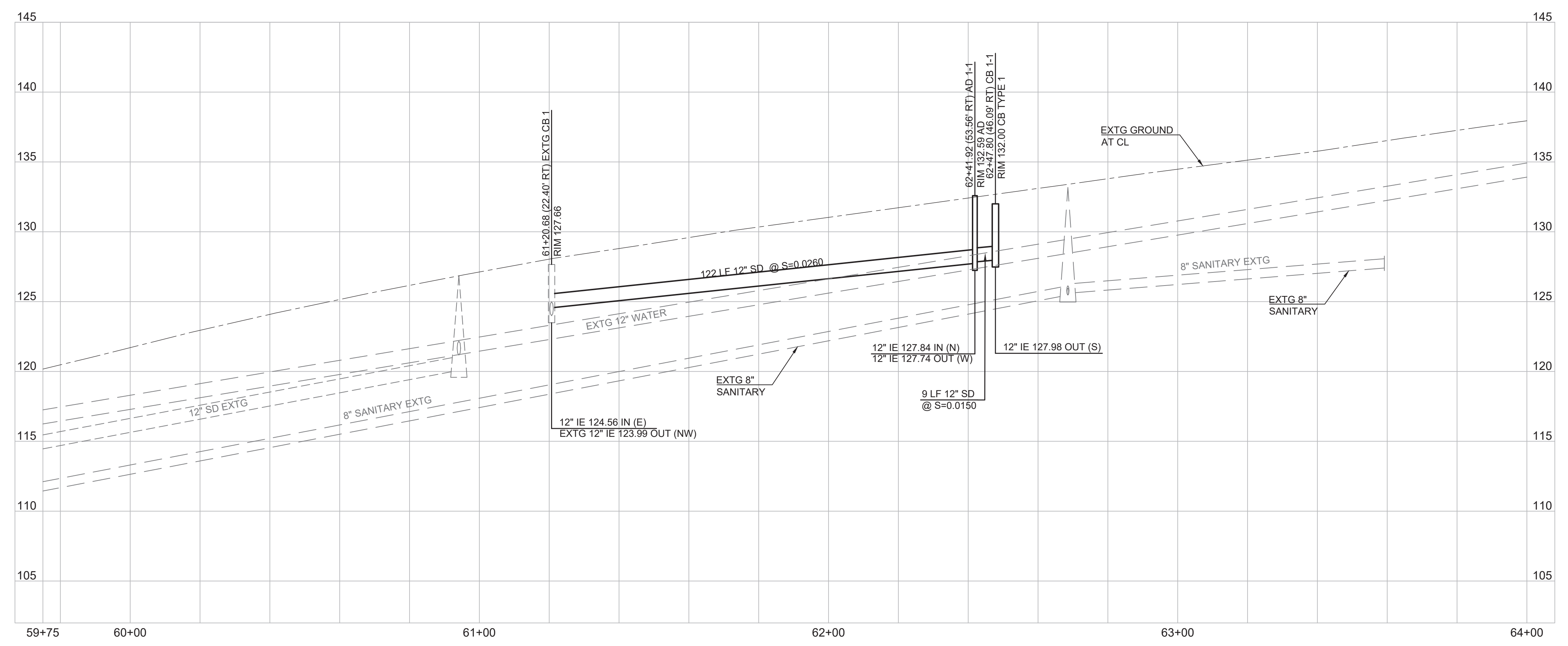
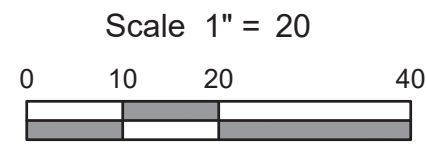
SHEET **18** OF **50**

FINAL PLANS

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- CONSTRUCTION NOTES:**
- GENERAL NOTES:**
- SEE TYPICAL SECTIONS SHEET TS01 FOR ADDITIONAL INFORMATION.
 - TREES TO BE REMOVED NOTED ON TR01-TR02 HAVE BEEN REMOVED FOR PLAN CLARITY.
- STORM DRAINAGE NOTES:**
- INSTALL CATCH BASIN TYPE 1 PER WSDOT STANDARD PLAN B-5.20. SEE SHEET STD02. CONNECTION TO EXISTING STORM PIPE.
 - INSTALL CATCH BASIN TYPE 1 WITH SOLID LOCKING LID PER WSDOT STANDARD PLAN B-5.20. SEE SHEET STD02.
 - INSTALL PVC CATCH BASIN 24" DIAM. W/ SOLID GRATE PER DETAIL, SHEET D01.
 - CONNECT TO EXISTING DRAINAGE STRUCTURE.

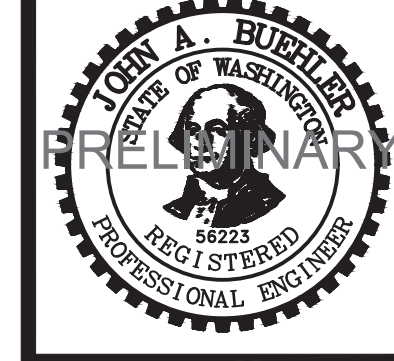


HATCHING LEGEND

	NEW PAVED ROADWAY AREA
	NEW CONCRETE AREA
	CEMENT CONCRETE SIDEWALK (THICKENED)

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**4TH STREET - STORM DRAINAGE PLAN AND PROFILE FOR:
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 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON**



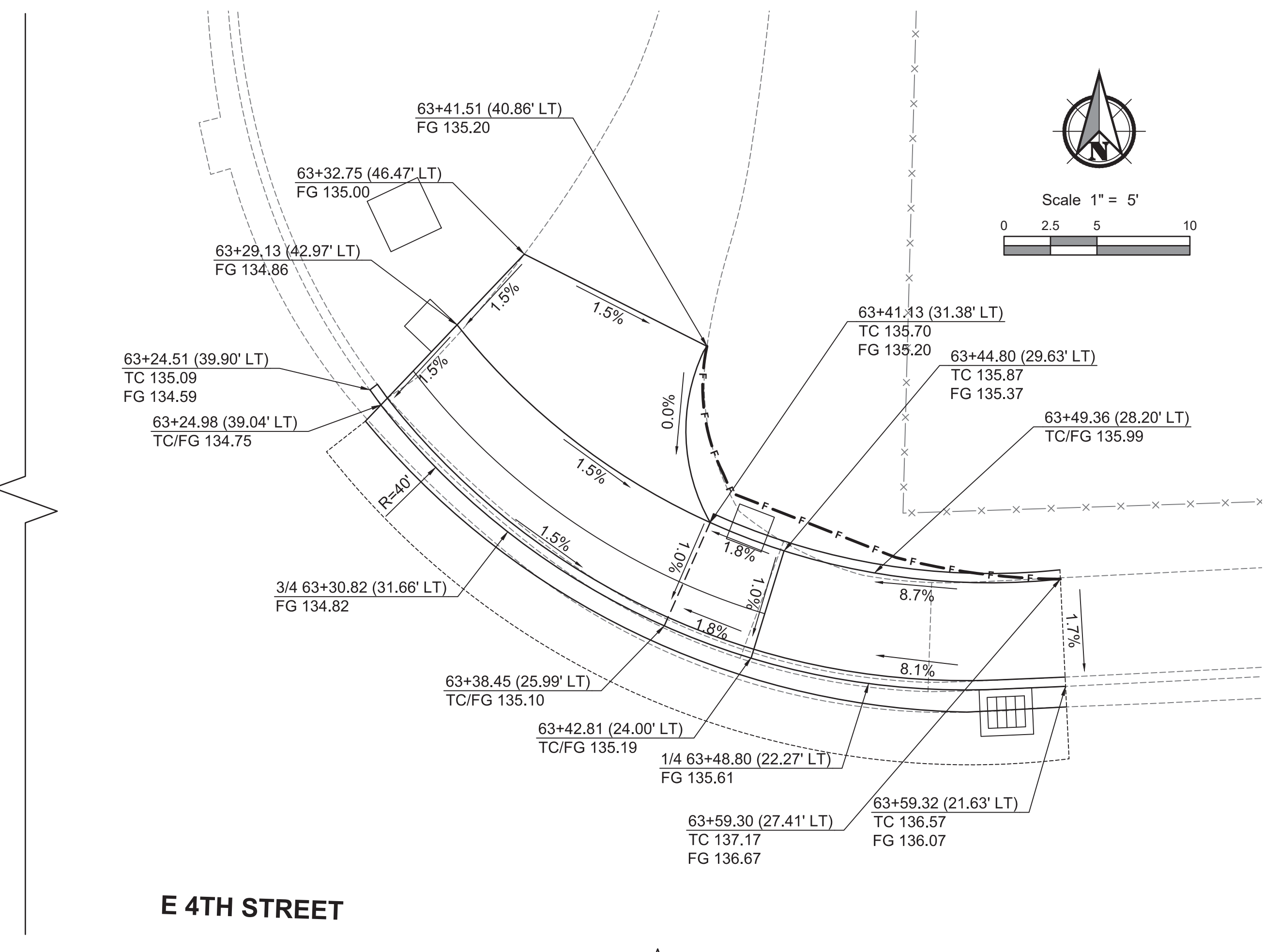
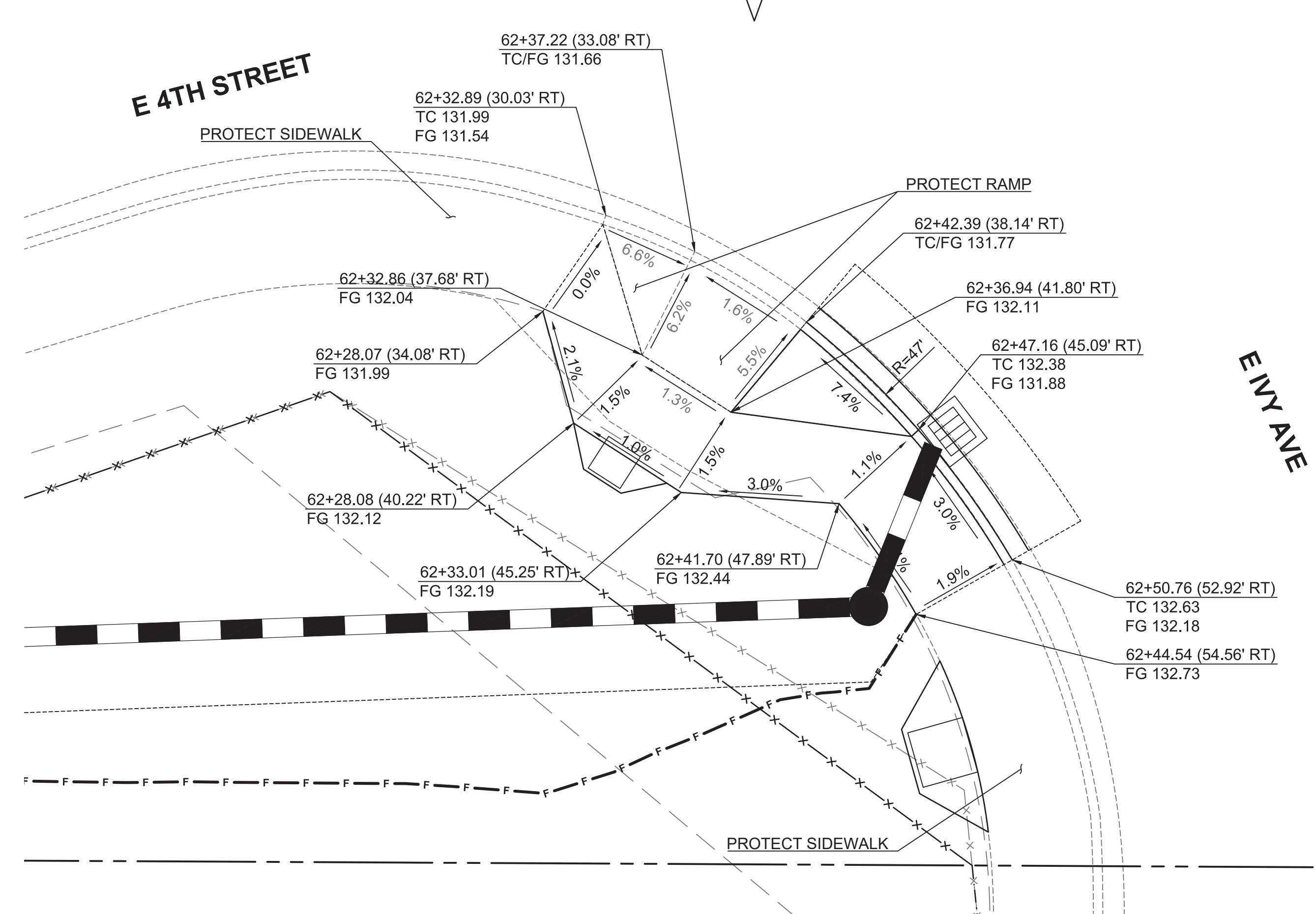
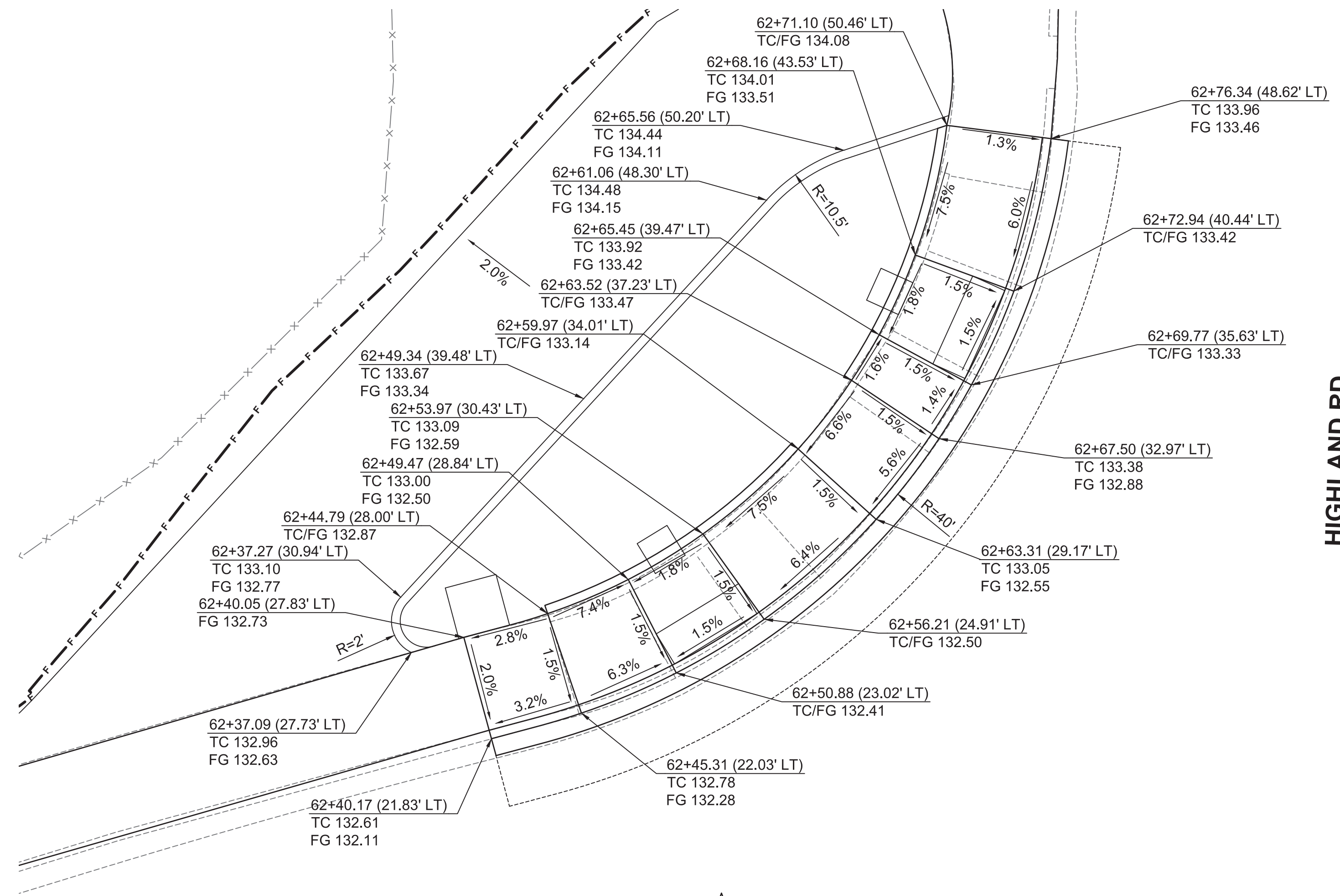
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 SHEET 19 OF 50

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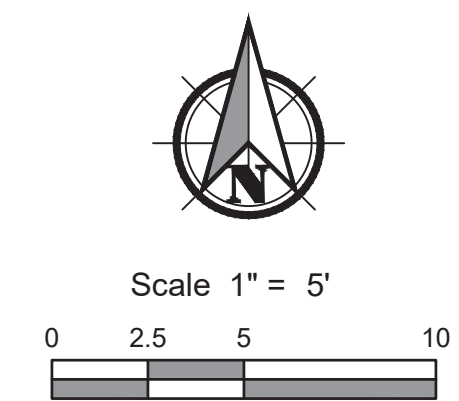
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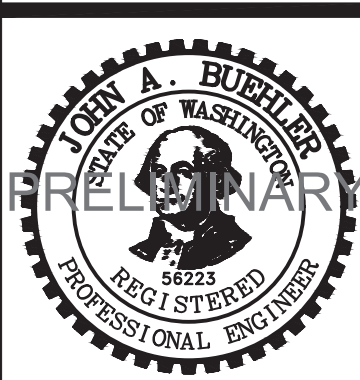
HIGHLAND RD

E 4TH STREET

E IVY AVE



INTERSECTION GRADING FOR:
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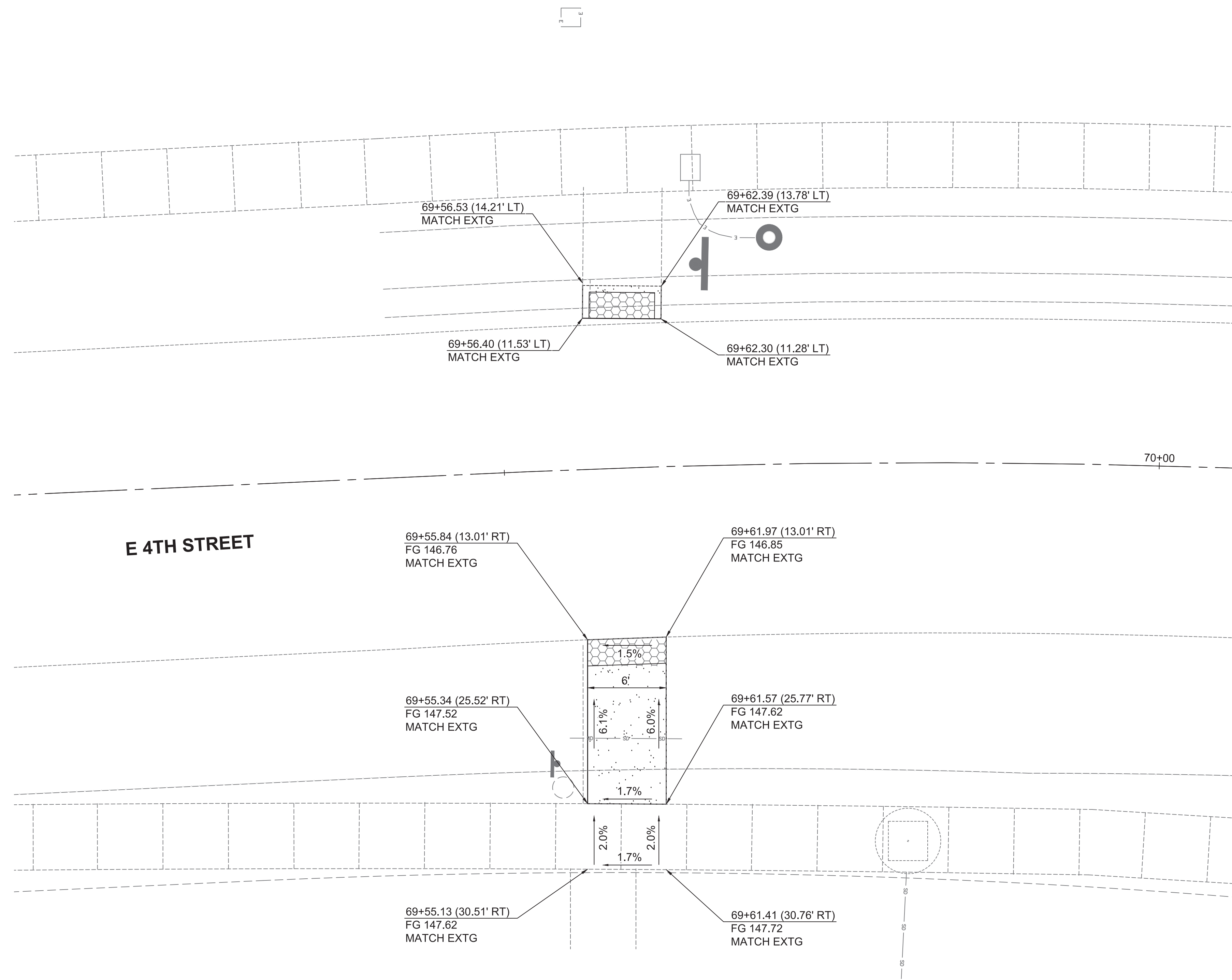
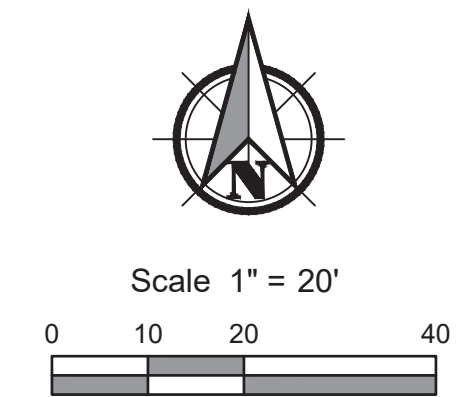
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GR01
SHEET **20** OF **50**

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RAMP GRADING FOR:

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GR02

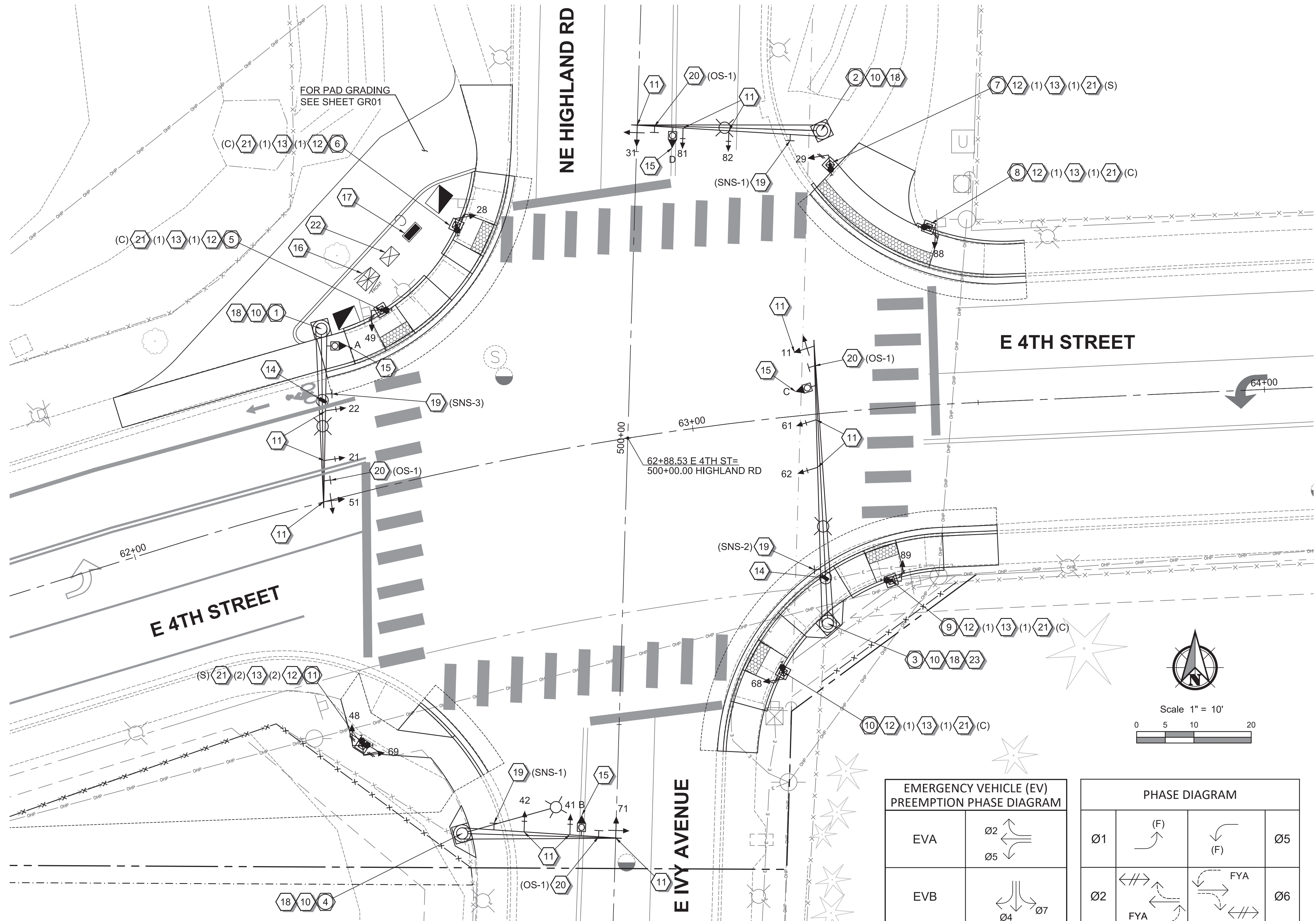
SHEET 21 OF 50

FINAL PLANS

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 User: Tamara Sabaner
 Layout Tab: TL01
 CAD Plot Date/Time: 5/6/2024 4:44:05 PM



DESIGN SPEED CHART		
STREET	APPROACH	POSTED SPEED (MPH)
E 4TH ST	WB	25
NE HIGHLAND RD	SB	25
E 4TH ST	EB	25
E IVY AVE	NB	N/A

EMERGENCY VEHICLE (EV) PREEMPTION PHASE DIAGRAM	
EVA	Ø2 Ø5
EVB	Ø4
EVC	Ø1 Ø6
EVD	Ø3 Ø8

PHASE DIAGRAM			
Ø1	(F)	(F)	Ø5
Ø2	←FYA	→FYA	Ø6
Ø3	(F) ←	→ (F)	Ø7
Ø4	←FYA	→FYA	Ø8

- PROTECTED VEHICLE MOVEMENT
- - - PERMITTED VEHICLE MOVEMENT
- ←FYA PEDESTRIAN MOVEMENT
- FYA FLASHING YELLOW ARROW
- (F) FUTURE PHASE NOT PROPOSED AT THIS TIME

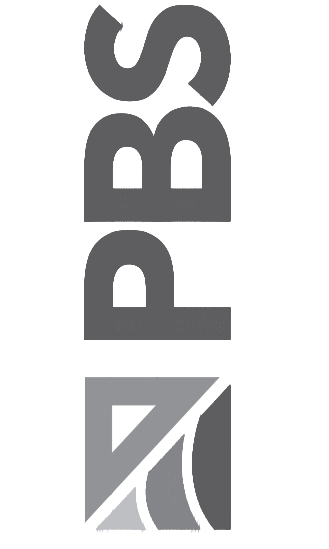
GENERAL NOTES:

- SEE SHEETS SS01 TO SS04 FOR SIGNING AND STRIPING PLANS.
- SEE SHEET TL04 FOR TRAFFIC SIGNAL WIRING DETAILS.
- SEE SHEET GR01 FOR ADA RAMP GRADING.
- CONTRACTOR SHALL USE NON-DESTRUCTIVE POTHOLE METHODS TO LOCATE UTILITIES NEAR ANY UNDERGROUND WORK. INSTALL SIGNAL EQUIPMENT AROUND CONFLICTING UTILITIES THAT MAY NOT BE SHOWN ON PLANS AND CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.

TRAFFIC SIGNAL NOTES:

- TRAFFIC SIGNAL STANDARD POLE NUMBER (#). SEE TRAFFIC SIGNAL AND LIGHTING POLE SCHEDULE, SHEET TL04.
- INSTALL BLACK POWDER-COATED TYPE III TRAFFIC SIGNAL POLE, INCLUDING FOUNDATION AND TERMINAL CABINET, PER MAST ARM DETAILS, SHEET TL05.
- INSTALL TRAFFIC SIGNAL HEAD (##) INCLUDING WIRE FROM HEAD TO TERMINAL CABINET. SEE SHEETS TL04 TO TL05. ## = HEAD NUMBER NOTED ON PLAN.
- INSTALL (X) PEDESTRIAN HEAD (##) AND MOUNT INCLUDING WIRE FROM HEAD TO TERMINAL CABINET PER WSDOT STD PLAN J-20.20. SEE SHEETS TL04 TO TL05. X = TOTAL NUMBER OF PEDESTRIAN DISPLAYS. ## = HEAD NUMBER NOTED ON PLAN.
- INSTALL (X) ACCESSIBLE PEDESTRIAN PUSHBUTTON INCLUDING WIRE FROM PUSHBUTTON TO TERMINAL CABINET PER WSDOT STD PLAN J-20.26. SEE SHEETS TL04 TO TL05. X = TOTAL NUMBER OF PEDESTRIAN PUSHBUTTONS.
- INSTALL GRIDSMART BELL CAMERA INCLUDING CONTINUOUS CABLE FROM CAMERA TO TRAFFIC SIGNAL CABINET AS SHOWN ON THE PLANS. SEE DETAIL ON SHEET TL05.
- INSTALL OPTICAL PREEMPTION DETECTION (N) INCLUDING FIELD WIRE FROM DETECTOR TO TERMINAL CABINET. SEE SHEETS TL04 TO TL05. N = PREEMPTION PHASE NOTED ON PLAN.
- INSTALL SIGNAL CONTROLLER CABINET ON CONCRETE PAD PER WSDOT STD PLAN J-10.10. SHEETS TL10 TO TL11. CONTROLLER CABINET DETAIL, SHEET TL09, AND RISER ADAPTER BASE DETAIL, SHEET TL08. COORDINATE WITH COMCAST (RON COX, 971-439-9519) FOR CABLE CONNECTION.
- INSTALL SERVICE CABINET ON CONCRETE PAD PER CLARK COUNTY STANDARDS. SEE SHEETS TL06 TO TL07.
- INSTALL LUMINAIRE ARM & LED LUMINAIRE HEAD PER SIGNAL POLE SCHEDULE, SHEET TL04.
- INSTALL STREET NAME SIGN SNS-(#) ON MAST ARM PER SIGN DETAIL, SHEET TL05, AND WSDOT STD PLAN G-30.10, SHEET TL09. # = STREET NAME SIGN NUMBER.
- INSTALL OVERHEAD REGULATORY SIGN OS-(#) ON MAST ARM PER SIGN DETAIL, SHEET TL05, AND WSDOT STD PLAN G-30.10, SHEET TL09. # = OVERHEAD SIGN NUMBER.
- INSTALL BLACK POWDER-COATED TYPE PEDESTRIAN SIGNAL (PS) POLE COMPLETE WITH PEDESTRIAN SIGNAL HEADS AND ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSHBUTTONS AS IDENTIFIED IN TRAFFIC SIGNAL NOTES 12 AND 13, THIS SHEET, PER WSDOT STD PLAN J-20.16 (SHEET TL12). INSTALL PS POLE ON (N) FOUNDATION. SEE SHEET TL04 FOR THE TRAFFIC SIGNAL SCHEDULE. SEE SHEET TL05 FOR APPURTENANCE ORIENTATION. N = FOUNDATION TYPE, AS FOLLOWS:
 *C = CURB BASE FOUNDATION PER WSDOT STD PLAN J-20.11 (SHEET TL12)
 *S = STANDARD FOUNDATION PER WSDOT STD PLAN J-21.10 (SHEET TL13)
- INSTALL UNIVERSAL POWER SYSTEM (UPS) IN TYPE 334 SIGNAL CABINET ON CONCRETE PAD PER WSDOT STD PLAN J-12.15 (SHEET TL11). SEE SPECIAL PROVISIONS FOR CABINET EQUIPMENT.
- INSTALL GRIDSMART REPEATER MODEL GS-3-REP IN SIGNAL POLE AT LOWER HANDHOLE.

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ABOVE-GROUND SIGNAL EQUIPMENT PLAN FOR:
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 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON

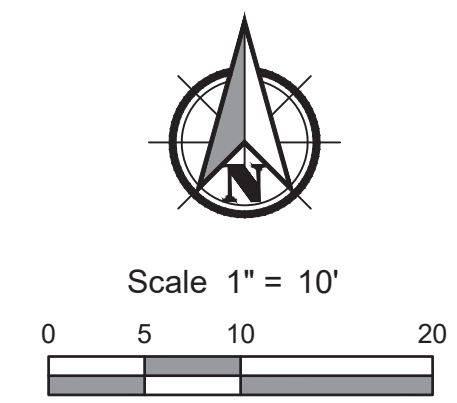
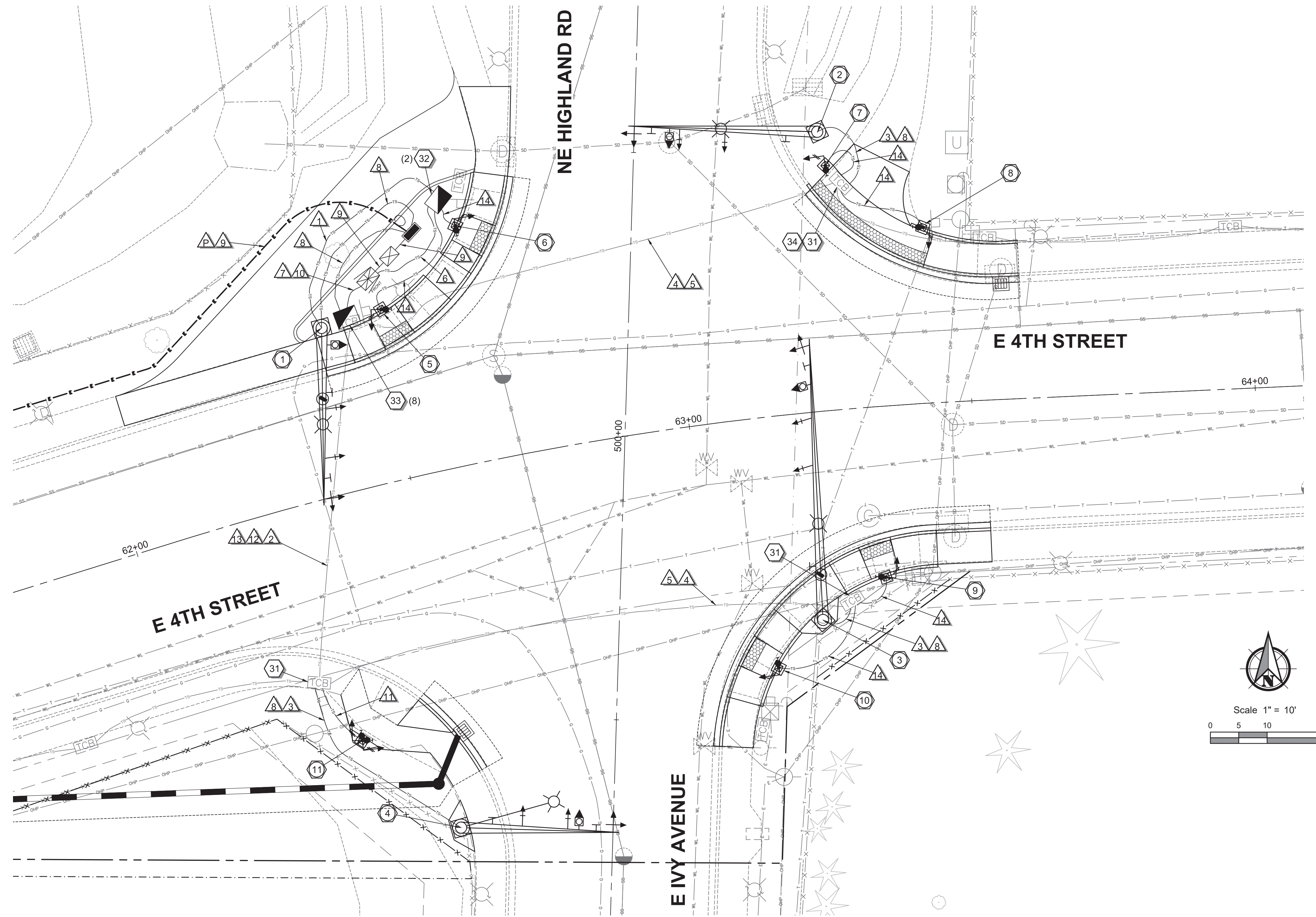


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SHEET ID
TL01
 SHEET 22 OF 50

FINAL PLANS

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GENERAL NOTES:

- SEE SHEETS SS01 TO #### FOR SIGNING AND STRIPING PLANS.
- CONDUIT LAYOUT IS DEPICTED SCHEMATICALLY. CONTRACTOR SHALL USE NON-DESTRUCTIVE POT HOLE METHODS TO LOCATE UTILITIES NEAR ANY UNDERGROUND WORK. LOCATION OF SIGNAL POLE FOUNDATION LOCATED WITH FUTURE IMPROVEMENTS IN CONSIDERATION. INSTALL AROUND CONFLICTING UTILITIES THAT MAY NOT BE SHOWN ON PLANS AND CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.

WIRING NOTES:

- # TRAFFIC SIGNAL STANDARD POLE NUMBER (#). SEE TRAFFIC SIGNAL POLE SCHEDULE, SHEET TL04.
- # TRAFFIC SIGNAL WIRING NUMBER (#) PER WIRING SCHEDULE, SHEET TL04.
- P DRAW POWER FROM EXISTING SECONDARY PEDESTAL (STA 61+20, 31' LT). COORDINATE WITH CLARK PUBLIC UTILITIES (CPU): CALL 360-992-8839 FOR STANDBY TO PLUMB CONDUIT AND WIRE INTO PEDESTAL. CPU WILL MAKE THE CONNECTIONS.

TRAFFIC SIGNAL NOTES:

- 31 CONTRACTOR TO VERIFY EXISTING TRAFFIC SIGNAL JUNCTION BOX, CONDUITS, MULE TAPES, AND LOCATOR WIRES ARE PRESENT AND SERVICEABLE.
- 32 INSTALL TYPE (#) JUNCTION BOX:
TYPE 1 & 2 - SEE WSDOT STD PLAN J-40.10, SHEET TL15.
TYPE 8 - SEE WSDOT STD PLAN J-40.30, SHEET TL15.
- 33 REPLACE EXISTING TYPE 2 JUNCTION BOX WITH TYPE 8 JUNCTION BOX PER WSDOT STD PLAN J-40.30, SHEET TL15.
ADJUST EXISTING CONDUITS TO FIT WITHIN NEW JUNCTION BOX.
- 34 REPLACE EXISTING JUNCTION BOX LID WITH NEW NON-SLIP LID.

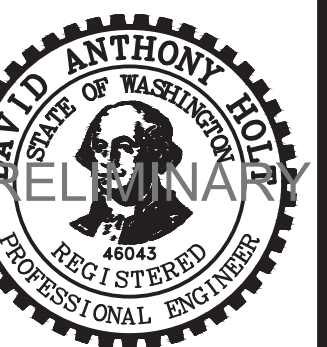
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**BELOW-GROUND SIGNAL EQUIPMENT PLAN FOR:
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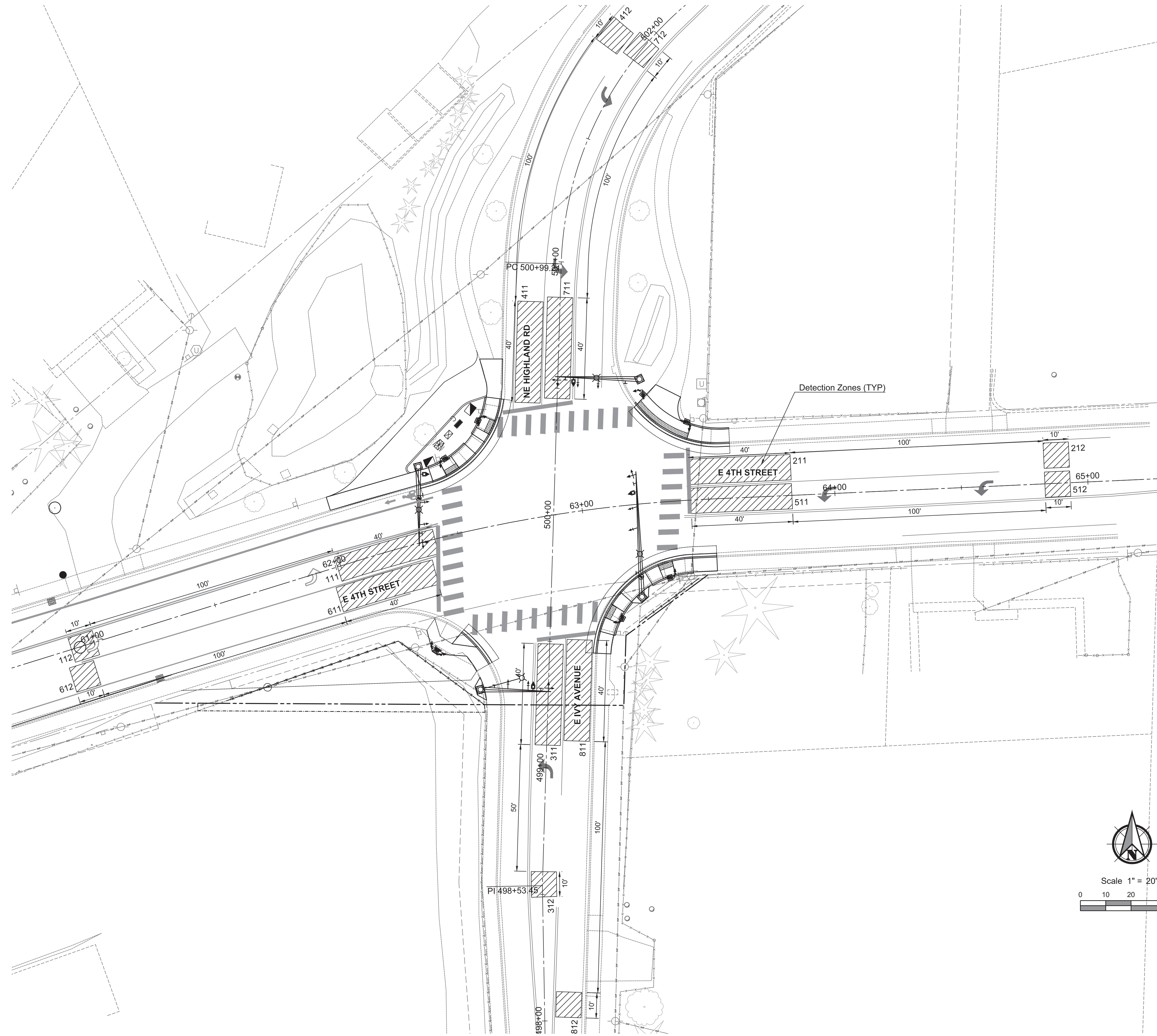
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SHEET **23** OF **50**

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Filename: L:\Projects\71000\71486\71486-000\Civil\CAD\Working\Sheets\Signal Plans\71486-000-TL01-TL09.dwg Layout Tab: TL03 User: Tammie Sabaner CAD Plot Date/Time: 5/6/2024 4:41:12 PM



DETECTION ZONE NOTES				
ZONE	PHASE	LANE	NUMBER	FUNCTION
111	1	1	1	CALL AND EXTEND
112	1	1	2	EXTEND
211	2	1	1	CALL AND EXTEND
212	2	1	2	EXTEND
311	3	1	1	CALL AND EXTEND
312	3	1	2	EXTEND
411	4	1	1	CALL AND EXTEND
412	4	1	2	EXTEND
511	5	1	1	CALL AND EXTEND
512	5	1	2	EXTEND
611	6	1	1	CALL AND EXTEND
612	6	1	2	EXTEND
711	7	1	1	CALL AND EXTEND
712	7	1	2	EXTEND
811	8	1	1	CALL AND EXTEND
812	8	1	2	EXTEND

GRIDSMA RT REPRESENTATIVE SHALL CONFIGURE CAMERAS TO RECOGNIZE THESE DETECTION ZONES AND TO SEND FUNCTION CALLS AS SHOWN ON THE SIGNAL CONTROLLER.

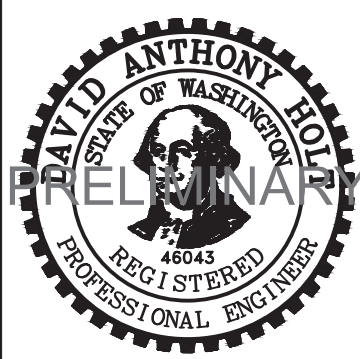
DETECTION PLAN FOR:

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TRAFFIC SIGNAL POLE SCHEDULE

TRAFFIC SIGNAL SYSTEM																ILLUMINATION SYSTEM								CAMERA SYSTEM				
POLE #	STATION	OFFSET (M)	TOP OF FOUNDATION ELEV.	POLE TYPE (6)	MAST ARM LENGTH (6)	A	B	C(2)	D	E	F(3)	H	SIGNAL HEADS		OPTICAL (2) PREEMPTION	PEDESTRIAN PUSH BUTTON	TRAFFIC SIGNS & OTHER OBJECTS	TERMINAL CABINET	LUMINAIRE	SHORTING CAP	J	K	L	WATTAGE (MAX.)	CLARK COUNTY LUMINAIRE SCENARIO(6)	N	P(4)	POLE #
													TRAFFIC	PEDESTRIAN														
1	E 4TH ST 62+41.17	29.35' LT	132.75	III	30.2	30.2	26.5	3.0	23.0	14.3	11.4	19.0			A	-	NEW STREET NAME SIGN, NEW REGULATORY SIGN, AND GRIDSMA RT CAMERA	YES	YES	YES	30	31.5	16	95	1 (THREE-LANE)	12.5	32	1
2	HIGHLAND RD 500+54.63	32.23' RT	134.64	III	33.2	32.2	29.2	26.1	24.2	16.4	6.5	19.0			D	-	NEW STREET NAME SIGN, NEW REGULATORY SIGN	YES	YES	YES	30	31.5	16	95	1 (THREE-LANE)	-	-	2
3	E 4TH ST 63+20.04	36.61' RT	135.29	III	49.5	48.5	45.0	41.6	35.6	27.3	9.5	19.0			C (14.5° OFF PERDICULAR)	-	NEW STREET NAME SIGN, NEW REGULATORY SIGN, AND GRIDSMA RT CAMERA	YES	YES	YES	30	31.5	16	95	1 (THREE-LANE)	12.5	32	3
4	E IVY AVE 499+30.18	26.79' LT	132.83	III	27.8	26.8	23.8	20.8	18.8	10.8	6.5	19.0			B	-	NEW STREET NAME SIGN, NEW REGULATORY SIGN	YES	YES(7)	YES	30	31.5	16	95	1 (THREE-LANE)	-	-	4
5	E 4TH ST 62+51.58	30.09' LT	132.99	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			5	
6	HIGHLAND RD 500+36.15	31.03' LT	133.68	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			6	
7	HIGHLAND RD 500+48.71	33.84' RT	134.98	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			7	
8	E 4TH ST 63+43.16	30.96' LT	135.28	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			8	
9	E 4TH ST 63+32.49	30.09' RT	135.78	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			9	
10	E IVY AVE 499+60.02	28.32' RT	134.74	PS	-	-	-	-	-	-	-	-			-	1 APS	-	NO					NONE	NONE			10	
11	E 4TH ST 62+29.74	42.80' RT	131.94	PS	-	-	-	-	-	-	-	-			-	2 APS	-	NO					NONE	NONE			11	

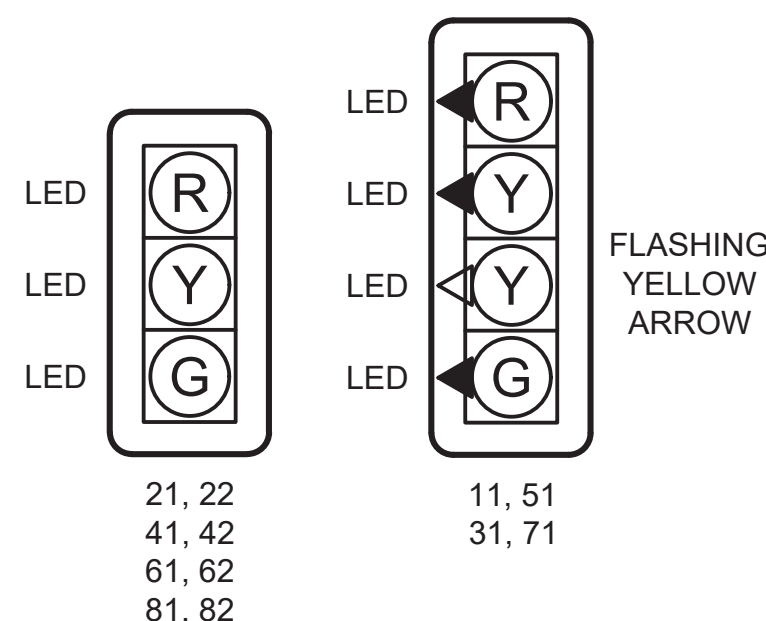
TRAFFIC SIGNAL POLE SCHEDULE NOTES:

- SEE SHEET TL05 FOR LETTER CODE DIMENSIONS ALONG MAST ARMS.
- OPTICAL PREEMPTION DETECTORS ON MAST ARMS ARE TO BE FIELD-DRILLED AND TAPPED USING SCHEDULE 80 THREADED GALVANIZED 90° ELBOWS AND THREADED GALVANIZED SCHEDULE 80 PIPE, OR ENGINEER-APPROVED EQUAL. THE MAST ARM IS NOT REQUIRED TO BE PROVIDED WITH THE TENONS OR FITTINGS FOR OPTICAL PREEMPTION. THE CONTRACTOR SHALL DRILL THE TAP HOLE FOR THE MAST ARM AT THE CENTER OF THE MAST ARM. PRIOR TO DRILLING AND TAPPING OF OPTICAL PREEMPTION, THE CONTRACTOR SHALL VERIFY WITH THE ENGINEER THE LOCATION OF THE TAP HOLE.
- MEASUREMENT TO STEEL STRAP FARTHEST FROM POLE CENTERLINE PER WSDOT STD PLAN G-30.10, SHEET TL09.
- SEE MANUFACTURER'S RECOMMENDATIONS FOR HEIGHT REQUIREMENTS. TOP OF CAMERAS AT MAXIMUM HEIGHT OF 35FT.
- LUMINAIRE MODEL SHALL BE AS SPECIFIED IN SECTION 9-29.10 OR APPROVED EQUAL FOLLOWING ACCEPTANCE GUIDELINES IN SECTION 9-29.10 AND 9-29.10(1).
- ALL POLES AND MAST ARMS SHALL HAVE A BLACK POWDER-COAT FINISH APPLIED BY THE MANUFACTURER.
- ON POLE #4 ONLY, ORIENT LUMINAIRE MAST ARM 343° CLOCKWISE FROM THE SIGNAL MAST ARM.

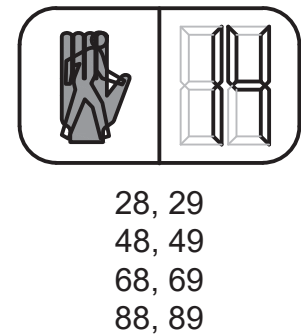
NEW SIGNAL HEAD NOTES

POLE NUMBER	SIGNAL HEAD	TYPE(1)(2)	DISPLAY	ANGLE (°) OFF PERPENDICULAR	MOUNT(3)(4)		NOTES
					TYPE	LOCATION	
1	51	4-SECTION	ARROW	7.5	N	MAST ARM	NEW
	21	3-SECTION	CIRCLE	7.5	N	MAST ARM	NEW
	22	3-SECTION	CIRCLE	7.5	N	MAST ARM	NEW
2	31	4-SECTION	ARROW	0	N	MAST ARM	NEW
	81	3-SECTION	CIRCLE	0	N	MAST ARM	NEW
3	82	3-SECTION	CIRCLE	0	N	MAST ARM	NEW
	11	4-SECTION	ARROW	14.5	N	MAST ARM	NEW
4	61	3-SECTION	CIRCLE	14.5	N	MAST ARM	NEW
	62	3-SECTION	CIRCLE	14.5	N	MAST ARM	NEW
5	71	4-SECTION	ARROW	0	N	MAST ARM	NEW
	41	3-SECTION	CIRCLE	0	N	MAST ARM	NEW
6	42	3-SECTION	CIRCLE	0	N	MAST ARM	NEW
	49	PEDESTRIAN	PED	-	E	POLE	NEW
7	28	PEDESTRIAN	PED	-	E	POLE	NEW
8	29	PEDESTRIAN	PED	-	E	POLE	NEW
9	88	PEDESTRIAN	PED	-	E	POLE	NEW
	89	PEDESTRIAN	PED	-	E	POLE	NEW
10	68	PEDESTRIAN	PED	-	E	POLE	NEW
	48	PEDESTRIAN	PED	-	E	POLE	NEW
11	69	PEDESTRIAN	PED	-	E	POLE	NEW

VEHICLE HEADS



PEDESTRIAN HEADS



TRAFFIC SIGNAL WIRING SCHEDULE

RUN NUMBER	CONDUIT			TRAFFIC SIGNAL	TRAFFIC SIGNAL	PEDESTRIAN DETECTION	PEDESTRIAN SIGNAL	OPTICAL PREEMPTION	GRIDSMA RT	ILLUMINATION	DRY CONDUIT	POWER	RUN NUMBER
	SIZE	MATERIAL	EXISTING (E) OR PROPOSED (P)	#14-7c	#14-5c	#14-7c	#14-2cs	#18-4cs	Cat 5e	#8	Mule Tape, Locator Wire	3 - #6	
1	2	SCHEDULE 80 PVC	P	1	1			1	1				1
2	3	SCHEDULE 40 PVC	E	2	2	4	4	2	1				2
3	2	SCHEDULE 80 PVC	P	1	1			1	1				3
4	3	SCHEDULE 40 PVC	E	1	1	2	2	1					4
5	3	SCHEDULE 40 PVC	E							2			5
6	2	SCHEDULE 80 PVC	P	1	1	2	2	1	1				6
7	3	SCHEDULE 80 PVC	P								1		7
8	2	SCHEDULE 80 PVC	P							2			8
9	3	SCHEDULE 80 HDPE	P									1	9
10	4	SCHEDULE 80 PVC	P	3	3	6	6	3	1				10
11	2	SCHEDULE 80 PVC	P			2	2						11
12	3	SCHEDULE 40 PVC	E								1		12
13	2	SCHEDULE 40 PVC	E							2			13
14	2	SCHEDULE 80 PVC	P			1	1						14

WIRING NOTES:

- ALL CONDUITS SHALL INCLUDE MULE TAPE AND LOCATOR WIRE (PULL TAPE AND GROUNDING CONDUCTOR) AS SPECIFIED IN SECTION 8-20.3(5). ALL (#) VALUES REFER TO AMERICAN WIRE GAUGE (AWG).
- 5c = MULTI-CONDUCTOR TRAFFIC/PEDESTRIAN SIGNAL CABLE MEETING THE REQUIREMENTS OF SECTION 9-29.3(2)B
- 7c = MULTI-CONDUCTOR TRAFFIC/PEDESTRIAN SIGNAL CABLE MEETING THE REQUIREMENTS OF SECTION 9-29.3(2)B
- Cat 5e = CATEGORY 5E ETHERNET CABLE MEETING THE REQUIREMENTS OF SECTION 9-29.3(2)J
- PVC = RIGID POLYVINYL CHLORIDE (PLASTIC) CONDUIT
- HDPE = HIGH-DENSITY POLYETHYLENE (PLASTIC) CONDUIT
- 2cs = 2-CONDUCTOR SHIELDED CABLE FOR PEDESTRIAN DETECTION MEETING THE REQUIREMENTS OF SECTION 9-29.3(2)E
- 4cs = 4-CONDUCTOR SHIELDED CABLE FOR OPTICAL PREEMPTION MEETING THE REQUIREMENTS OF SECTION 9-29.3(2)G

SIGNAL HEAD NOTES:

- 3-SECTION AND 4-SECTION VEHICLE HEADS SHALL BE PER SECTION 9-29.16. ALL VEHICLE SIGNAL HEADS SHALL HAVE 12-IN DIAMETER LED DISPLAYS IN EACH SECTION PLUS BACK PLATES AND REFLECTOR TAPE AROUND THE SIGNAL HEAD ASSEMBLY.
- PEDESTRIAN HEADS SHALL BE PER SECTION 9-29.20. NEW PEDESTRIAN SIGNAL HEADS ARE 16-IN (H) x 19.5-IN (W) x 10.5-IN (D) WITH TYPE E MOUNTS, Z-CRATE VISORS, AND WALKER/HAND DISPLAY WITH WHITE LED SOLID-FILLED WALKER AND ORANGE LED SOLID-FILLED HAND PLUS ORANGE LED NUMERICAL COUNTDOWN TIMER DISPLAY.
- MOUNT TYPE NOMENCLATURE SHALL BE PER WSDOT STD PLANS J-75.10 & J-75.20, SHEET TL17.
- TYPE "N" MOUNTS SHALL BE MOUNTED INCLUDING TETHER LINE AND WIRE ROPE (CABLE MOUNT), NOT METAL BAND STYLE MOUNTING. THE CABLES SHALL BE PROVIDED WITH SUFFICIENT LENGTH TO INSTALL THE MOUNT. TYPE "N" MOUNTS SHALL BE PROVIDED TO ALLOW THE SIGNAL HEAD TO MOVE VERTICALLY, ROTATE AND SWIVEL.

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TRAFFIC SIGNAL WIRING DETAILS FOR:
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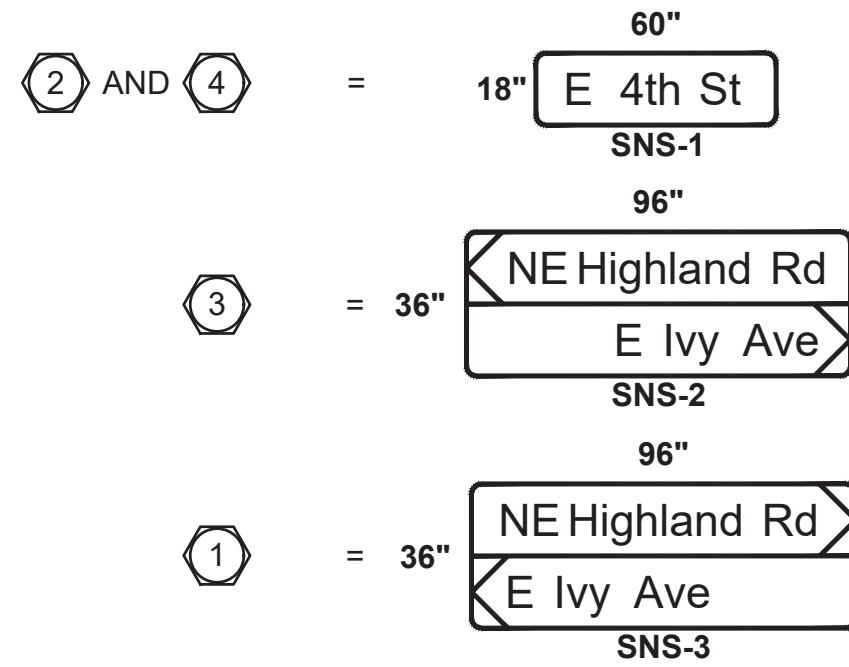
SHEET 25 OF 50

FINAL PLANS

MUTCD R3-5L SIGN SHALL PRESENT BLACK LETTERS AND LEGEND ON TYPE IV WHITE SHEETING.

STREET NAME SIGNS ARE 18-IN HIGH. LETTERS (12-IN UPPER CASE AND 9-IN LOWER CASE SERIES "C") AND BORDERS SHALL BE TYPE XI WHITE SHEETING. BACKGROUND SHALL BE TYPE IV GREEN SHEETING. SIGNS SHALL INCLUDE BORDERS, MARGINS, AND CORNER RADI.

STREET NAME SIGN LEGENDS ARE AS FOLLOWS:



MOUNT OVERHEAD SIGNS AND STREET NAME SIGNS TO MAST ARMS PER WSDOT STD PLAN G-30.10, SHEET TL09.

SIGN DETAILS
NTS

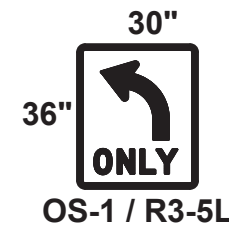
- ① = ILLUMINATION PHOTOELECTRIC CELL
- ② = HANDHOLE
- ③ = PEDESTRIAN SIGNAL HEAD
- ④ = TERMINAL CABINET
- ⑤ = PEDESTRIAN PUSHBUTTONS WITH SIGNS
- ⑥ = HANDHOLE
- ⑦ = GRIDSMART CAMERA

- NOTES:**
- THE ARROW ON EACH PEDESTRIAN PUSHBUTTON AND THE INDICATION ON EACH PEDESTRIAN SIGNAL HEAD SHALL BE ORIENTED TOWARDS THE CROSSWALK THEY SERVE.
 - ALL TYPE III POLES SHALL INCLUDE TERMINAL CABINETS ORIENTED SUCH THAT, WHEN FACING DIRECTLY AT THE OPEN TERMINAL CABINET, ONE IS FACING THE CENTER OF THE INTERSECTION, UNLESS SHOWN OTHERWISE ON THE PLANS.
 - PROVIDE 16.5 FT. MIN. TO 19 FT. MAX. (TYP) FROM TOP OF PAVEMENT TO BOTTOM OF TRAFFIC SIGNAL BACKPLATE.

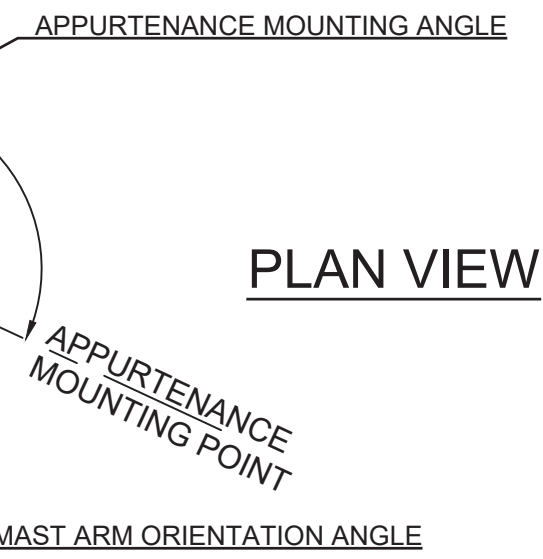
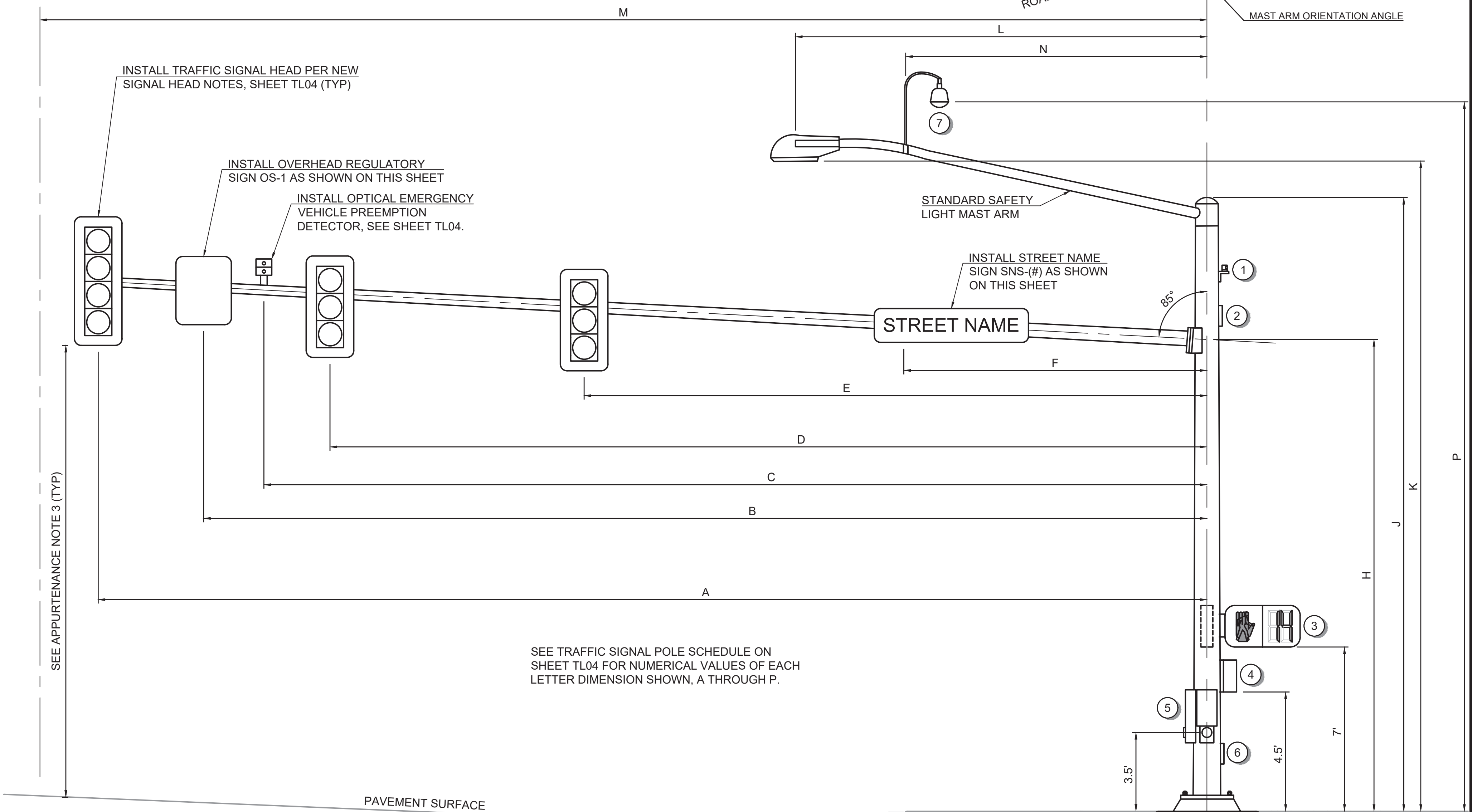
ON TYPE III POLES, THE TRAFFIC SIGNAL MAST ARM ORIENTATION IS MEASURED IN DEGREES CLOCKWISE FROM THE STATION/OFFSET LINE PERPENDICULAR TO THE CENTERLINE OF THE ADJACENT ROAD. THE APPURTENANCE MOUNTING ANGLES ARE MEASURED IN DEGREES CLOCKWISE FROM THE TRAFFIC SIGNAL MAST ARM.

ON TYPE PS POLES, THE APPURTENANCE MOUNTING ANGLES ARE MEASURED IN DEGREES CLOCKWISE FROM THE STATION/OFFSET LINE PERPENDICULAR TO THE CENTERLINE OF THE ADJACENT ROAD.

SEE APPURTENANCE ORIENTATION TABLE, THIS SHEET, FOR MOUNTING ANGLES.



☉ STREET



PLAN VIEW

SEE APPURTENANCE NOTE 3 (TYP)

SEE TRAFFIC SIGNAL POLE SCHEDULE ON SHEET TL04 FOR NUMERICAL VALUES OF EACH LETTER DIMENSION SHOWN, A THROUGH P.

PAVEMENT SURFACE

SEE SPECIAL PROVISION 8.20.3(4) AND FOUNDATION DEPTH "D" TABLE ON WSDOT STD PLAN J-26.10, SHEET TL14, FOR SIGNAL STANDARD FOUNDATION DETAILS. USE A CALCULATED MOMENT LOAD (XYZ) OF UP TO 1900 FT³ AND AN ALLOWABLE LATERAL BEARING PRESSURE OF 1000 POUNDS PER SQUARE FOOT (PSF). FOUNDATIONS ARE SHOWN AS 3-FOOT SQUARE, ASSUMING A 10-FOOT DEPTH. CONTRACTOR SHALL CONFIRM ALTERNATE SHAPE AND/OR SIZE WITH ENGINEER BEFORE PROCEEDING. SEE WSDOT STD PLAN J-26.15, SHEET TL14, FOR FOUNDATION PLACEMENT CONDITIONS.

ELEVATION VIEW

APPURTENANCE ORIENTATION

SIGNAL STANDARD	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
REFERENCE ALIGNMENT	PERPENDICULAR TO CENTERLINE OF E 4TH ST	PERPENDICULAR TO CENTERLINE OF HIGHLAND RD	PERPENDICULAR TO CENTERLINE OF NE LOCKWOOD CREEK RD	PERPENDICULAR TO CENTERLINE OF E IVY AVE	PERPENDICULAR TO CENTERLINE OF E 4TH ST	PERPENDICULAR TO CENTERLINE OF HIGHLAND RD	PERPENDICULAR TO CENTERLINE OF HIGHLAND RD	PERPENDICULAR TO CENTERLINE OF E 4TH ST	PERPENDICULAR TO CENTERLINE OF E 4TH ST	PERPENDICULAR TO CENTERLINE OF E IVY AVE	PERPENDICULAR TO CENTERLINE OF E 4TH ST
LUMINAIRE MAST ARM	13°	0°	3°	0°	N/A	N/A	N/A	N/A	N/A	N/A	N/A
①	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
②	180°	180°	180°	180°	N/A	N/A	N/A	N/A	N/A	N/A	N/A
③	N/A	N/A	N/A	N/A	102°	259°	79°	277°	98°	261°	188°/284°
④	110°	121°	136°	111°	N/A	N/A	N/A	N/A	N/A	N/A	N/A
⑤	N/A	N/A	N/A	N/A	282°	79°	259°	97°	278°	81°	8°/104°
⑥	180°	180°	180°	180°	N/A	N/A	N/A	N/A	N/A	N/A	N/A
⑦	270°	N/A	270°	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

FINAL PLANS

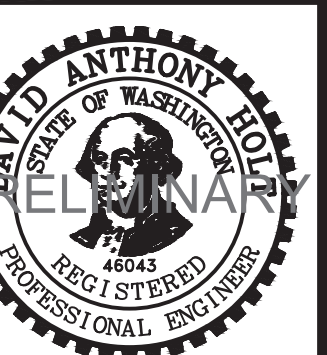
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TRAFFIC SIGNAL MAST ARM DETAILS FOR:
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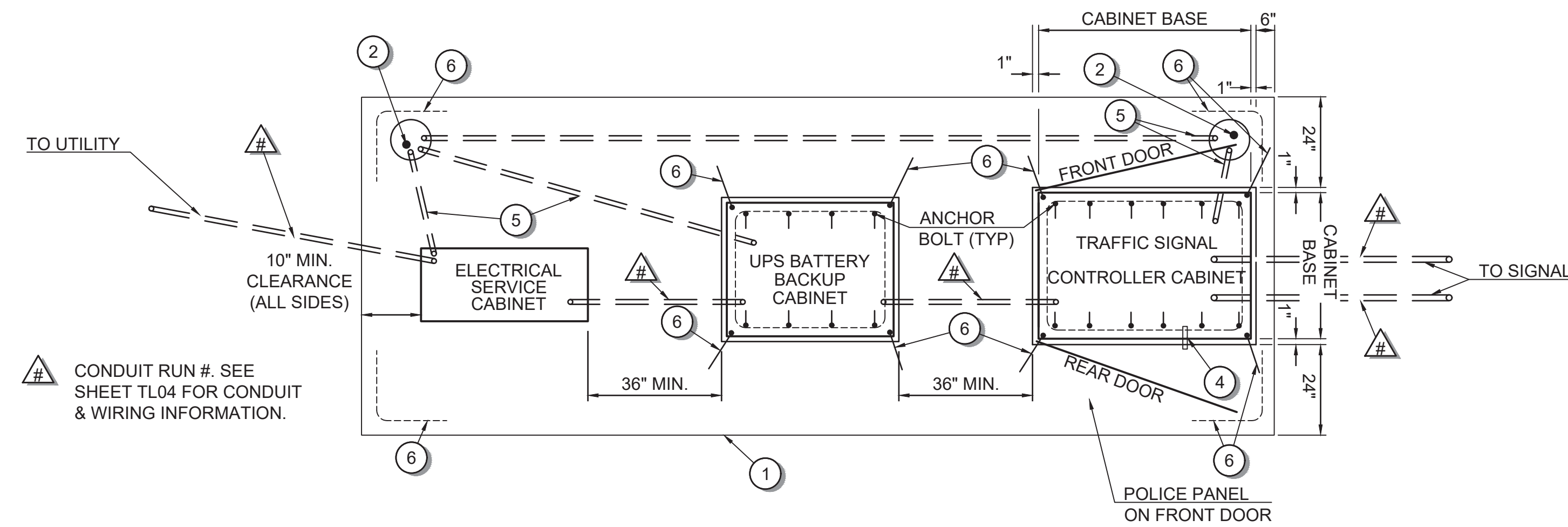


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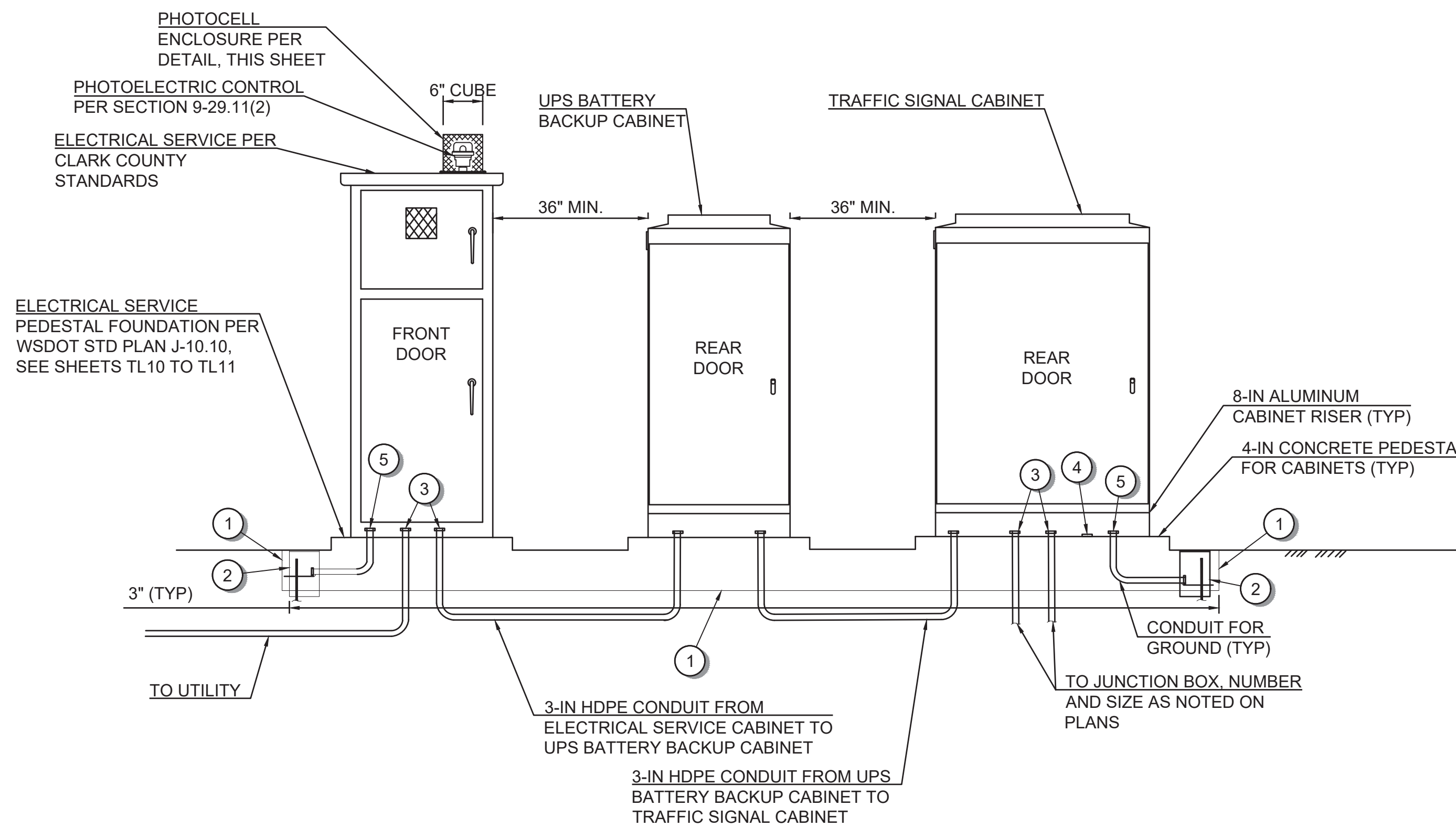
SHEET 26 OF 50

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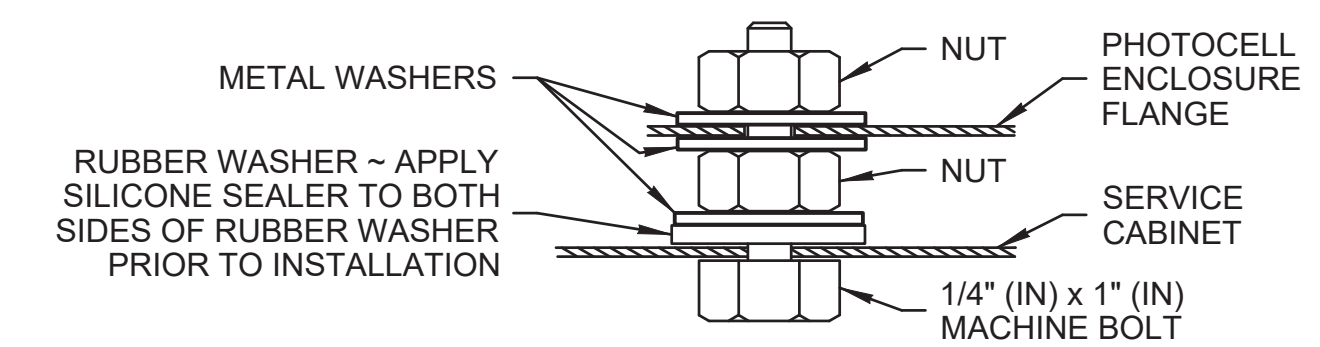
PLAN VIEW OF TRAFFIC SIGNAL CABINETS

CONCRETE PAD DETAIL FOR ELECTRIC SERVICE CABINET, UPS CABINET, AND TRAFFIC CONTROL CABINET
NORTHWEST CORNER OF NE HIGHLAND ROAD & E 4TH STREET INTERSECTION



ELEVATION VIEW OF TRAFFIC SIGNAL CABINETS

CONCRETE PAD DETAIL FOR ELECTRIC SERVICE CABINET, UPS CABINET, AND TRAFFIC CONTROL CABINET
NORTHWEST CORNER OF NE HIGHLAND ROAD & E 4TH STREET INTERSECTION



PHOTOCELL ENCLOSURE MOUNTING DETAIL

PHOTOCELL AND ENCLOSURE INSTALLATION NOTES:

- THE PHOTOELECTRIC CONTROL UNIT (PHOTOCELL) SHALL BE CENTERED IN THE PHOTOCELL ENCLOSURE TO PERMIT 360-DEGREE ROTATION OF THE PHOTOCELL WITHOUT REMOVAL OF THE PHOTOCELL UNIT OR THE PHOTOCELL ENCLOSURE.
- THE PHOTOCELL ENCLOSURE SHALL BE FABRICATED AS A 6-INCH CUBE FROM EITHER:
 - 5/8 INCH EXPANDED STEEL MESH WITH THE WELDED SEAMS AND MOUNTING FLANGES, HOT-DIP GALVANIZED AFTER FABRICATION, OR
 - TYPE 5052 - H32 ALUMINUM WITH 5/8-INCH X 5/8-INCH OPENINGS EQUIVALENT TO 5/8-INCH EXPANDED STEEL MESH.
- ALL NUTS, BOLTS, AND WASHERS USED FOR MOUNTING THE PHOTOCELL ENCLOSURE SHALL BE STAINLESS STEEL.

GENERAL NOTES:

- SEE WSDOT STD PLAN J-10.10 ON SHEETS TL10 TO TL11 FOR DETAILS NOT SHOWN.

WIRING NOTES:

- INSTALL 6-IN THICK CONCRETE PAD, ENTIRE WIDTH OF PAD, BETWEEN THE FACE OF CABINET (FRONT SIDE) AND BACK OF WALK, OR IF NO ADJACENT WALK, 24-IN MINIMUM.
- DRIVE GROUND RODS BEFORE PLACING CONCRETE. MOVE ROD(S) AND DRAIN TILE(S) WITH COVER(S) AS REQUIRED TO ACHIEVE FULL GROUND PENETRATION. MAINTAIN A 6-FT MINIMUM CLEARANCE BETWEEN GROUND RODS AS DETAILED ON WSDOT STD PLAN J-60.05, SHEET TL13.
- ALL METAL CONDUITS PENETRATING CABINET SHALL BE TERMINATED WITH GROUNDING END BELL BUSHING AND BONDED TO THE CABINET GROUNDING BUS. THE END BELL BUSHING ON PVC CONDUIT SHALL EXTEND 2-IN MINIMUM AND 3-IN MAXIMUM ABOVE THE COUPLING.
- 3/8 IN. WEEP DRAIN IN TOP OF CONCRETE PEDESTAL FOR CABINET. SLOPE CONCRETE PEDESTAL TO DRAIN TO WEEP HOLE (AT THE BACK SIDE OF THE CABINET FOUNDATION).
- CONDUITS FOR SERVICE GROUNDING ELECTRODES PER WSDOT STD PLAN J-60.05, SHEET TL13.
- ALL REINFORCING STEEL SHALL BE EMBEDDED 2-IN BELOW SURFACE OF CONCRETE. USE #4 HOOPS AND REBAR FOR CABINET FOOTING PER WSDOT STD PLAN J-10.10, SHEETS TL10 TO TL11.

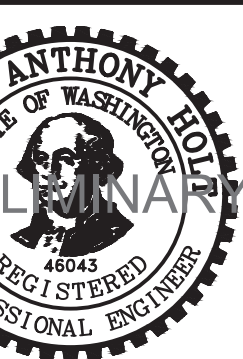
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 Vancouver, WA 98683
 360.895.3488
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TRAFFIC SIGNAL CABINET DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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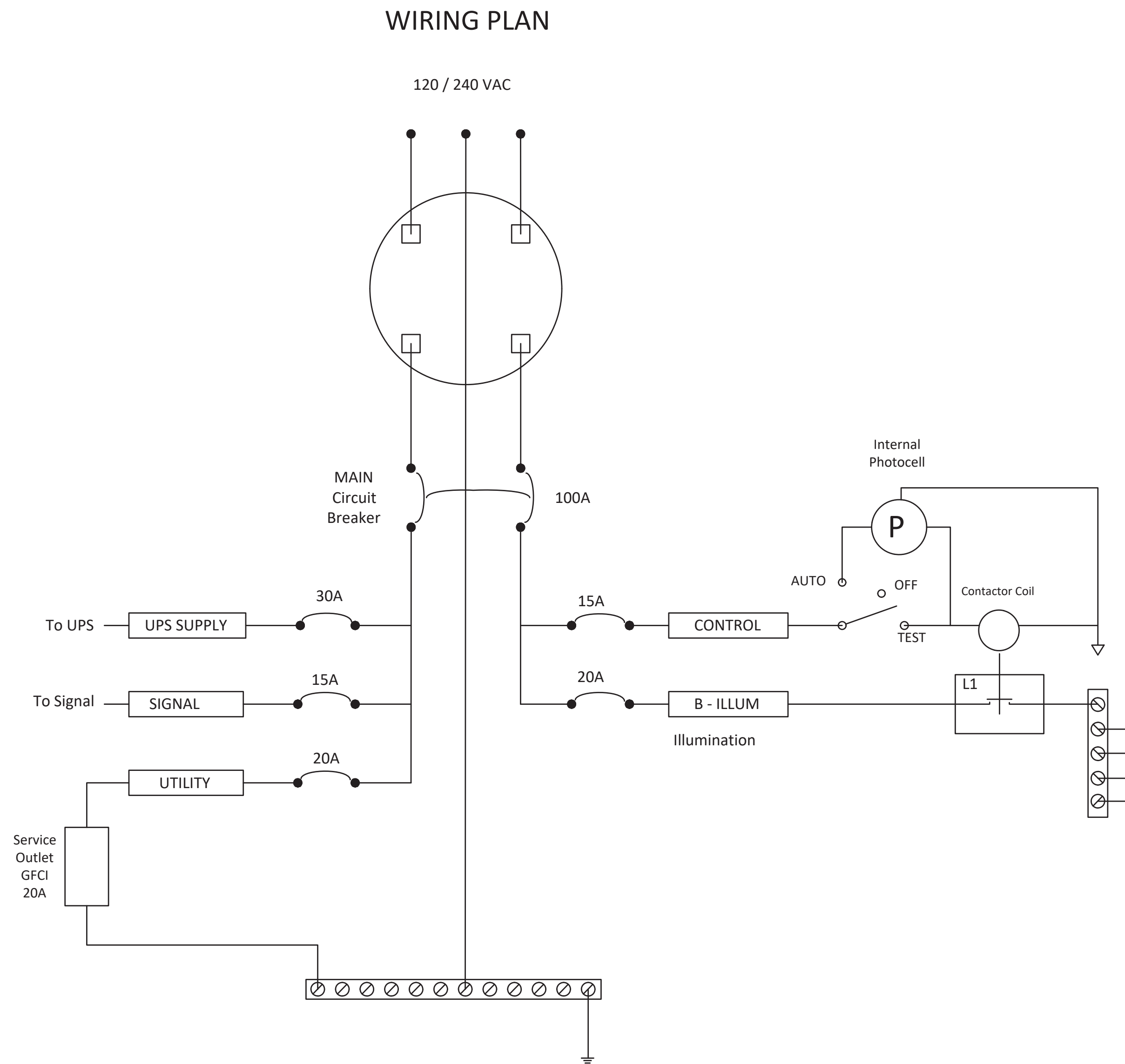
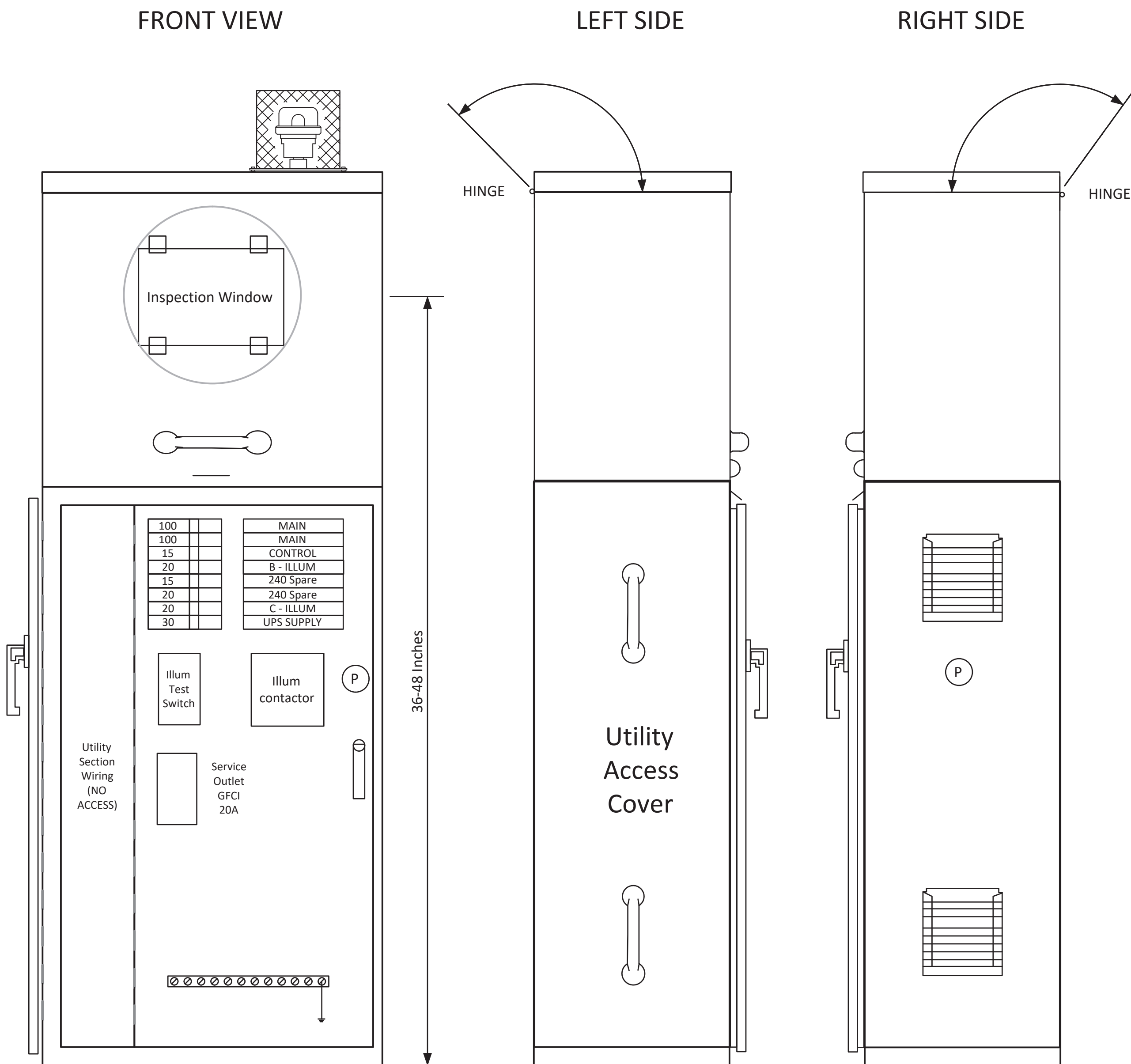
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 BJB/MK/ASV
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 DAH
 MAY 2024
 71486.000

SHEET ID
TL06

SHEET 27 OF 50

FINAL PLANS

Clark County Electrical Service Cabinet 100 AMP



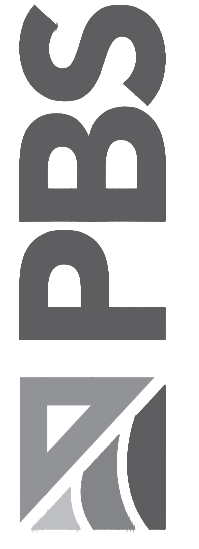
For Layout Purposes Only – Do Not Scale on this drawing

FINAL PLANS

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Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

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TRAFFIC SIGNAL CABINET DETAILS FOR:
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A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON

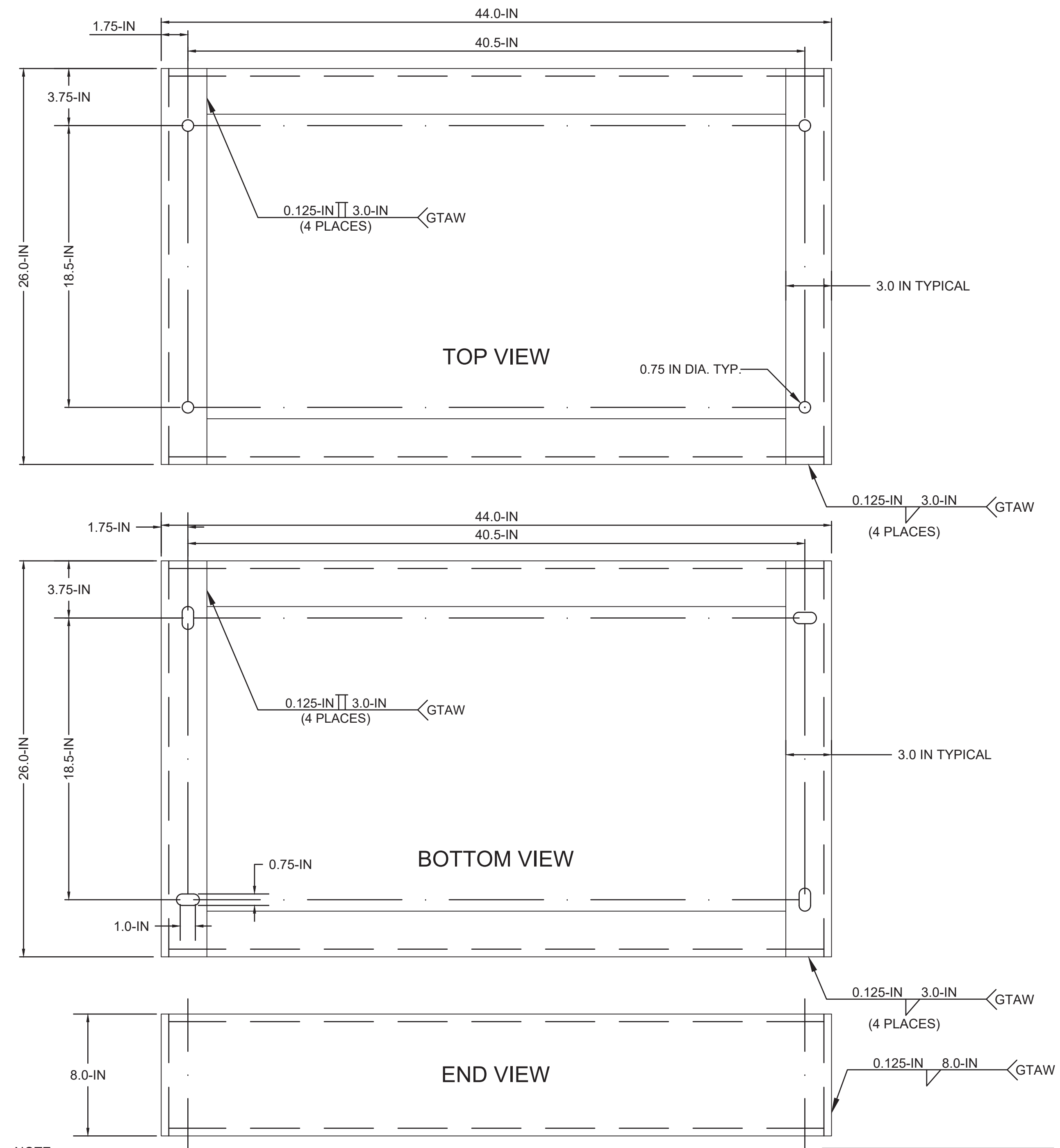


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B./BMK/ASV
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DAH
MAY 2024
71486.000

SHEET ID
TL07

SHEET **28** OF **50**

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NOTE:

1. FIELD VERIFY BOLT PATTERN & LOCATION PRIOR TO FABRICATION
2. GROOVE SIZE AND FILLET SIZE ARE EQUAL TO MATERIAL THICKNESS
3. RISER ADAPTER BASE TO BE COATED WITH THE SAME INSIDE AND OUTSIDE MATERIAL AND COLORS AS THE CONTROLLER CABINET
4. MATERIAL SHALL BE 0.125-IN SHEET ALUMINUM (5052-H32), MINIMUM THICKNESS.

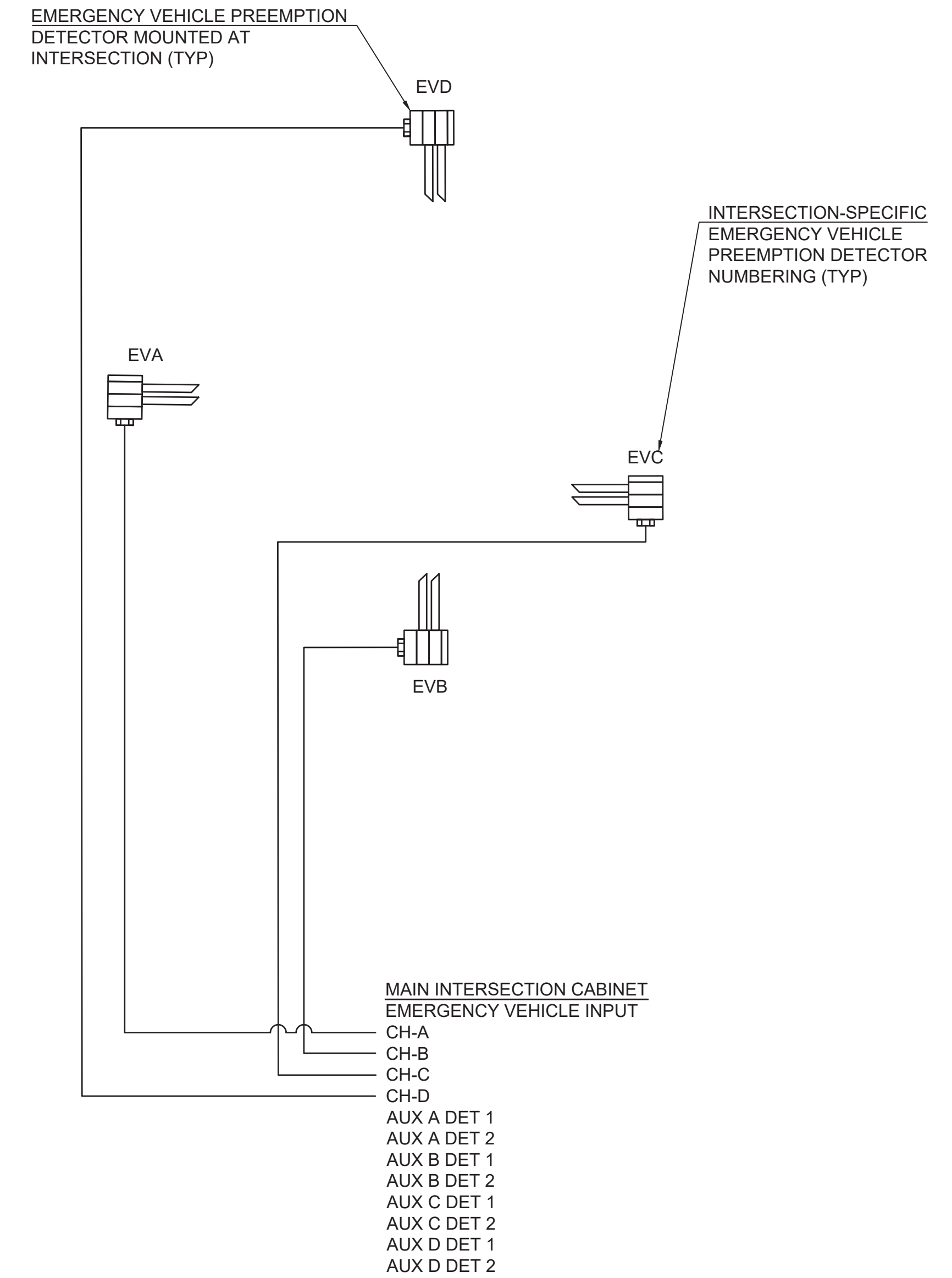
TOLERANCES:

ANGLE	± 1°
X.XX	± 0.125
HOLES	+0.005 -0.002

GTAW = TIG WELDS

RISER ADAPTER BASE

SPECIAL EMERGENCY VEHICLE PREEMPTION OPERATIONS AND WIRING



NOTE:

THE CONTRACTOR SHALL PROVIDE THE CABINETS FOR THE SIGNALS WITH THE EMERGENCY VEHICLE PREEMPTION AUXILIARY INTERFACE PANEL WITH ALL WIRING NECESSARY TO CONNECT THE WIRES AS SHOWN.

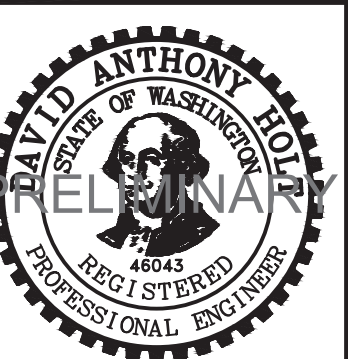
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TRAFFIC SIGNAL CONTROLLER CABINET FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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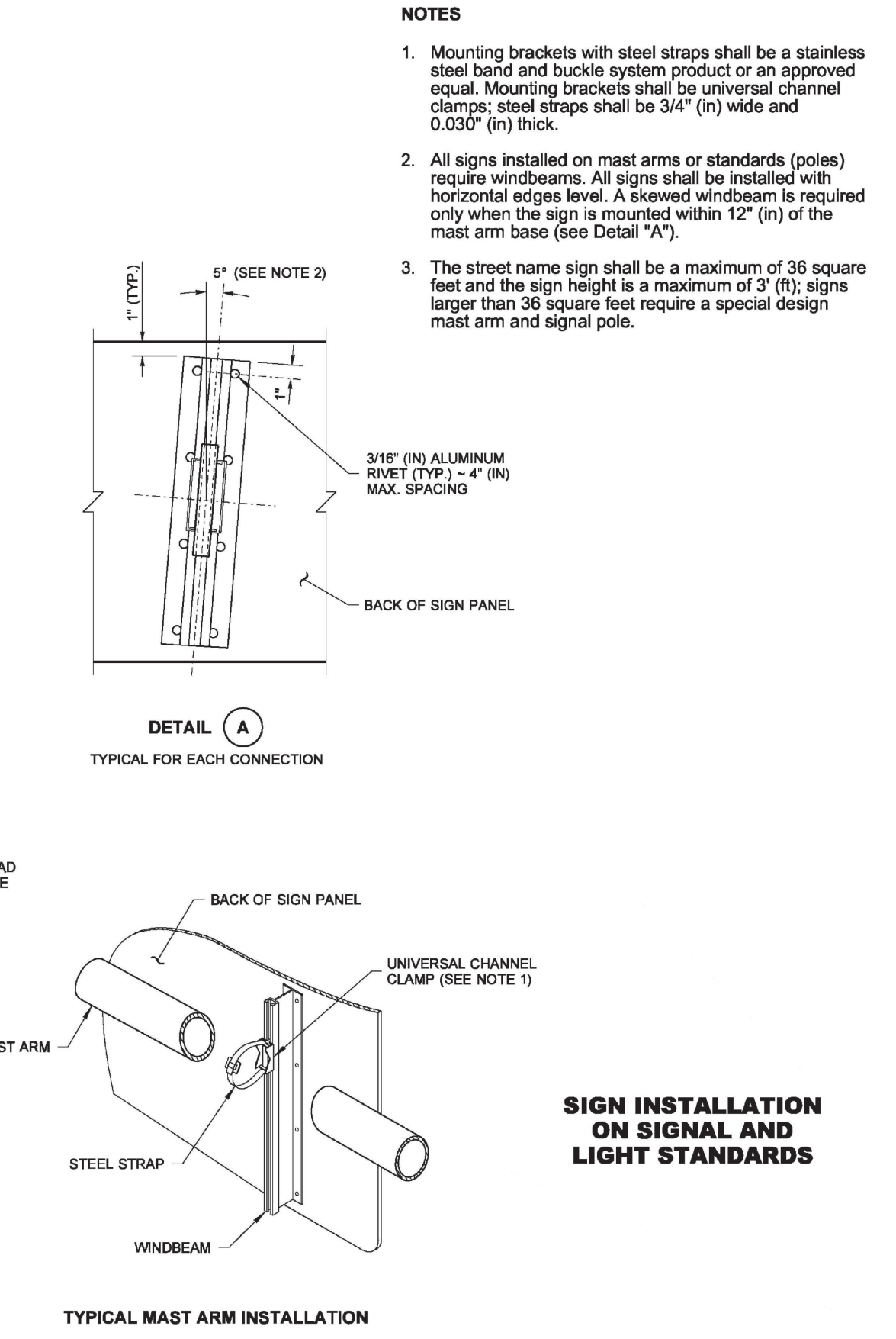
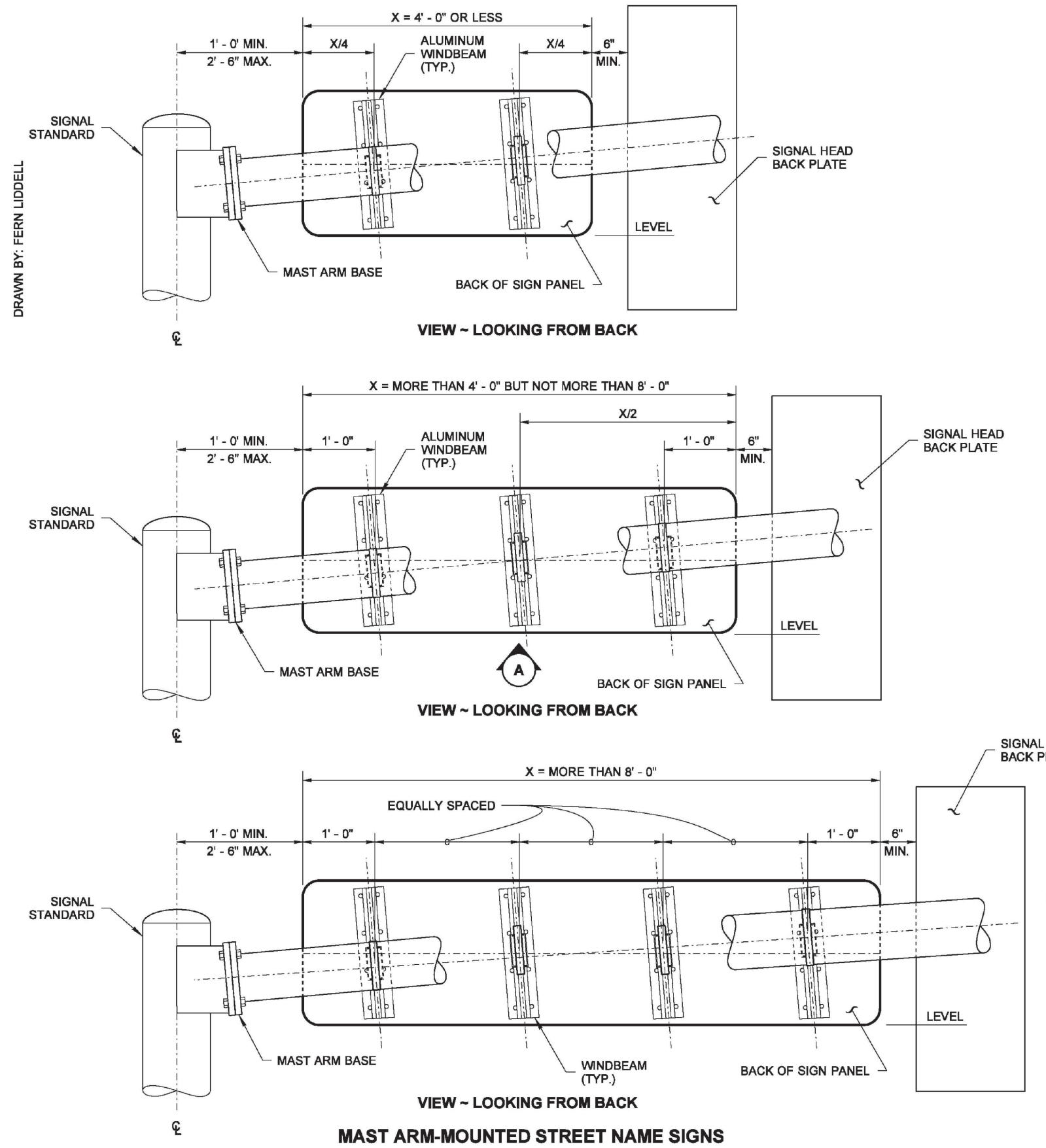
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 MAY 2024
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SHEET ID
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SHEET 29 OF 50

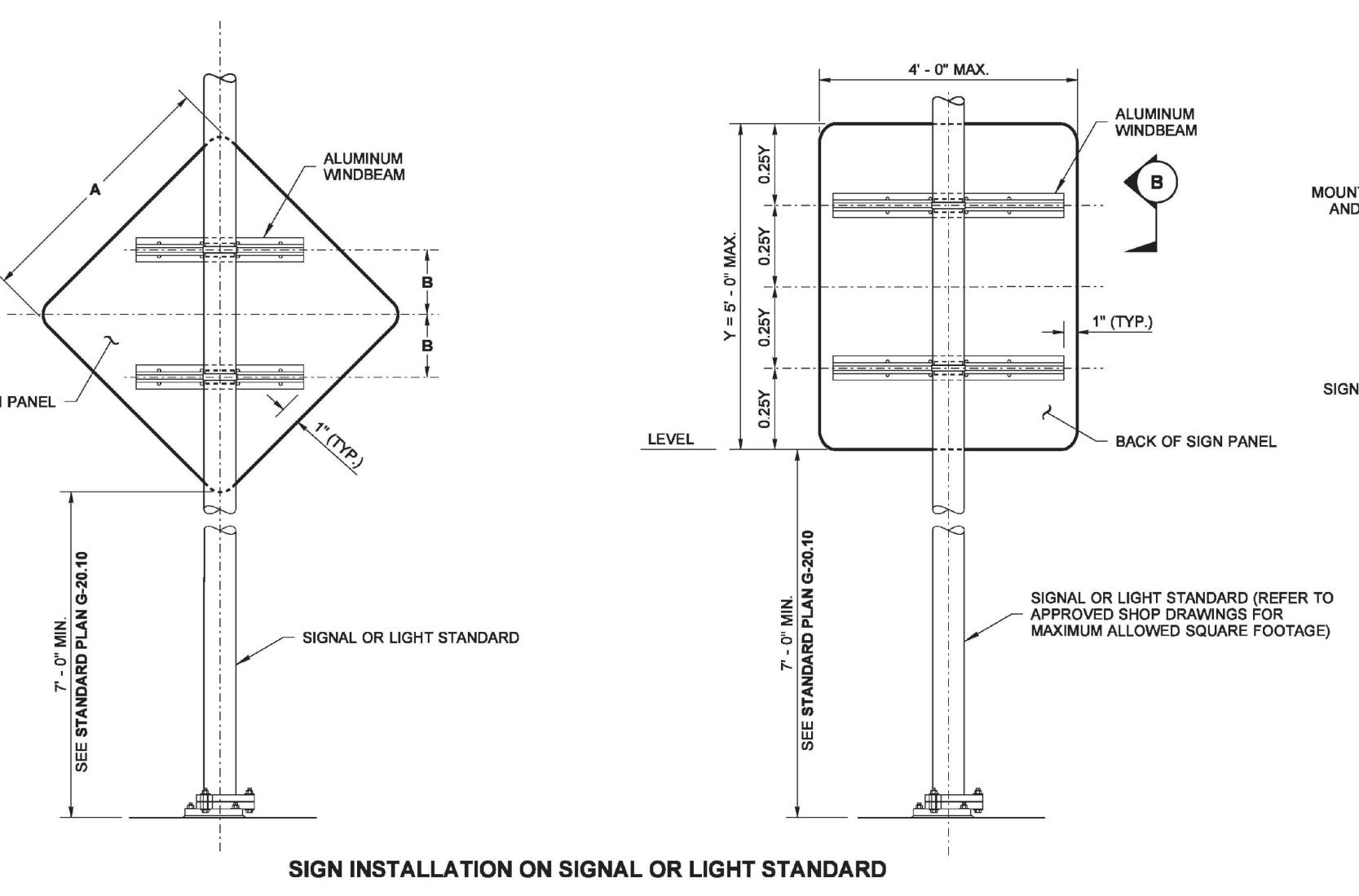
FINAL PLANS

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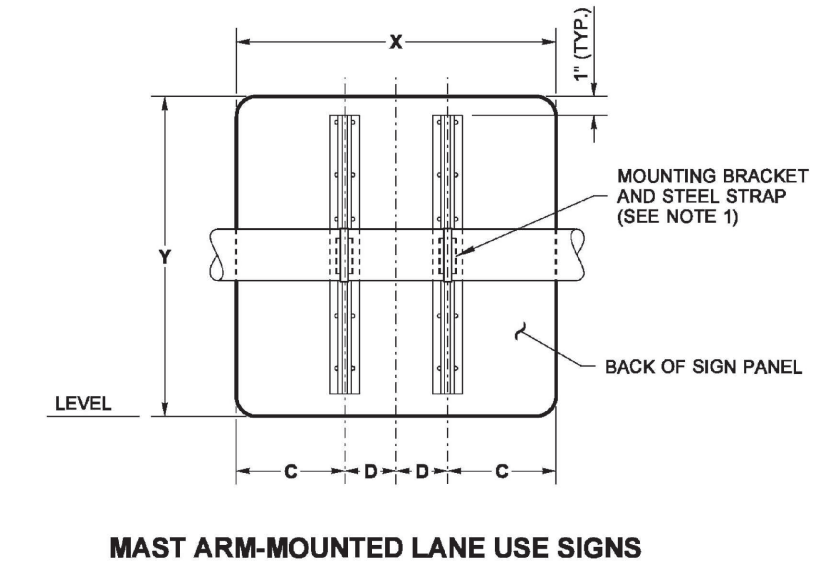
- NOTES**
1. Mounting brackets with steel straps shall be a stainless steel band and buckle system product or an approved equal. Mounting brackets shall be universal channel clamps; steel straps shall be 3/4" (in) wide and 0.030" (in) thick.
 2. All signs installed on mast arms or standards (poles) require windbeams. All signs shall be installed with horizontal edges level. A skewed windbeam is required only when the sign is mounted within 12" (in) of the mast arm base (see Detail "A").
 3. The street name sign shall be a maximum of 36 square feet and the sign height is a maximum of 3' (ft); signs larger than 36 square feet require a special design mast arm and signal pole.

DIMENSIONS	
A	B
3'-0"	9"
4'-0"	1'-0"



DIMENSIONS			
X	Y	C	D
3'-0"	2'-6"	1'-0"	6"
3'-0"	3'-0"	1'-0"	6"
3'-0"	4'-0"	1'-3"	9"
4'-0"	2'-6"	1'-3"	9"

NOTE:
Any Lane Use Sign greater than 7.5 sq ft requires a Special Design Mast Arm and Signal Pole.



SIGN INSTALLATION ON SIGNAL AND LIGHT STANDARDS

THIS DRAWING SHOWS THE GENERAL CABINET LAYOUT FOR CLARK COUNTY NEMA TS2 TYPE 1 "STRETCH P" TYPE CABINET.

SOME COMPONENTS ARE SHOWN IN THE DRAWING THAT MAY NOT BE SPECIFICALLY REQUIRED BY THIS PARTICULAR PROJECT FOR EACH CABINET.

SECTIONS 8-20 AND 9-29 OF THE SPECIAL PROVISIONS HAVE THE SPECIFIC EQUIPMENT THAT IS TO BE PROVIDED FOR THE CABINET TO BE DELIVERED FOR THIS PROJECT.

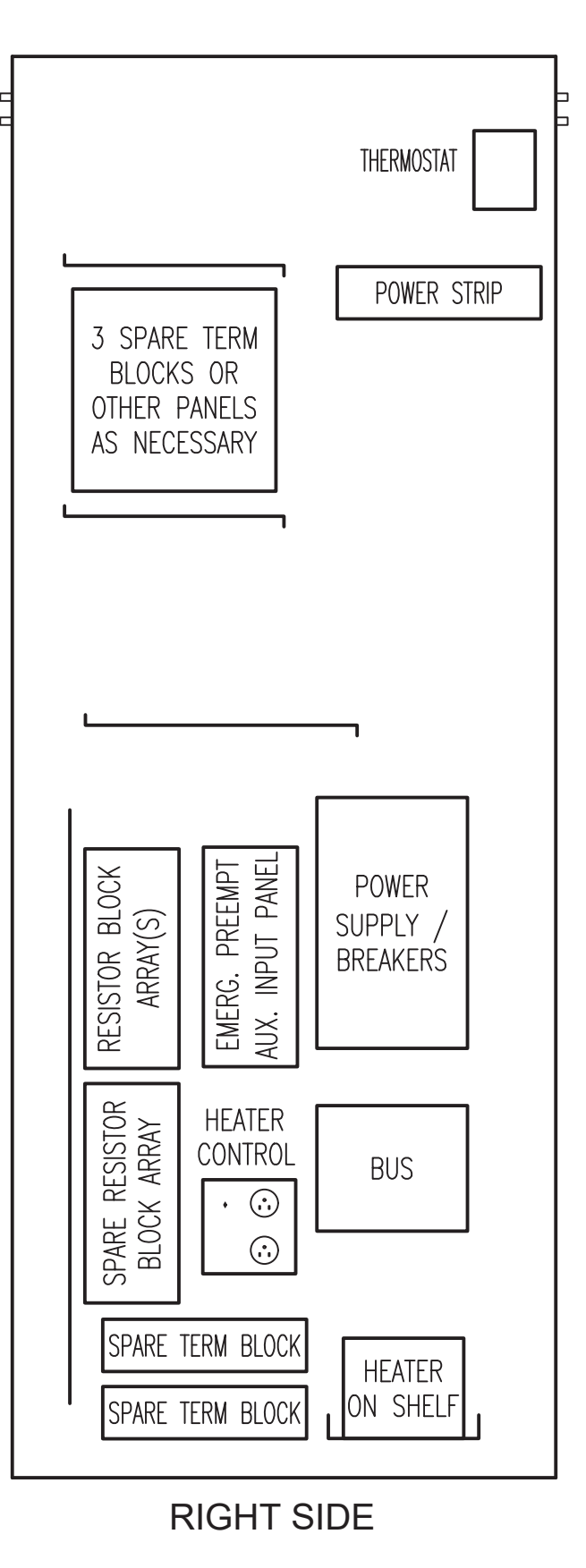
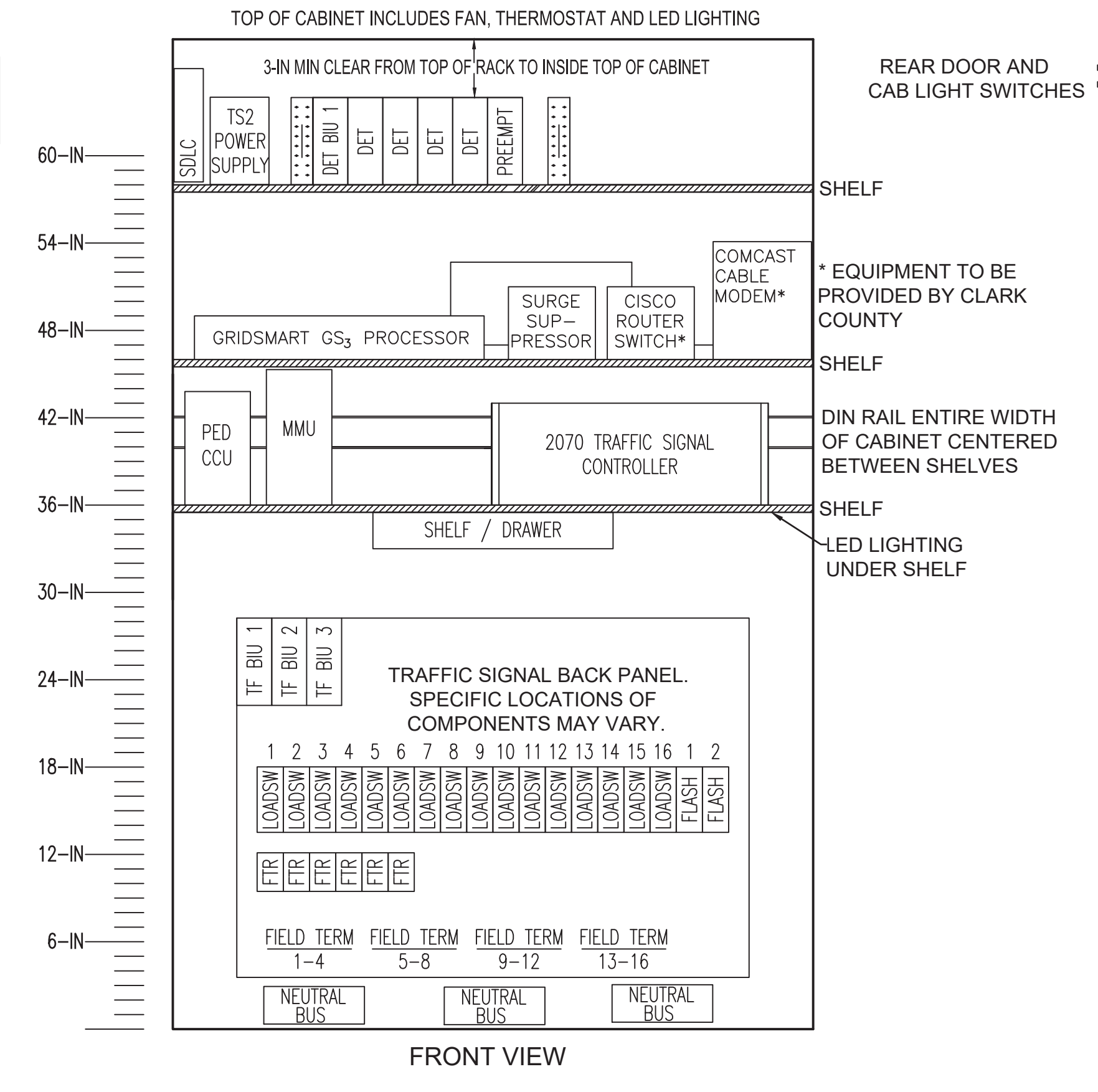
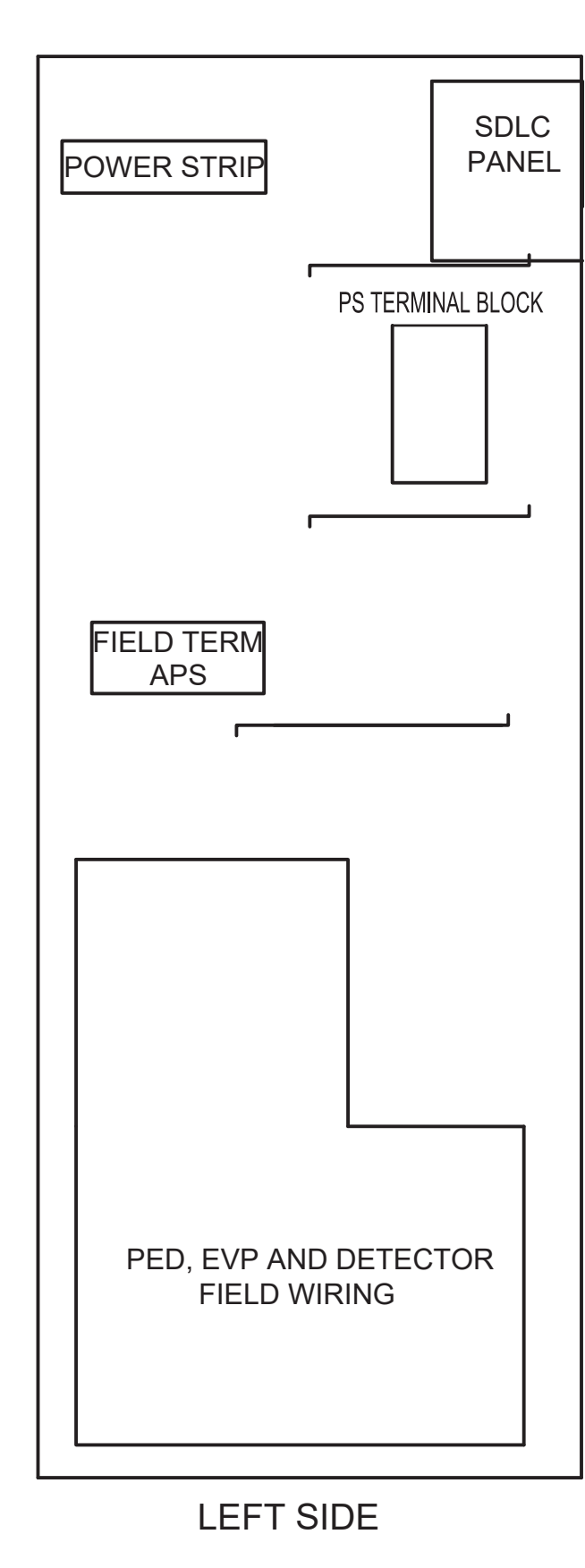
THE CABINET VENDOR MAY PROPOSE ALTERNATE CONFIGURATIONS DEPENDING ON THE SPECIFIC REQUIREMENTS OF THE PROJECT.

THE VIDEO DETECTION FIELD WIRING PANEL SHALL BE MOUNTED SUCH THAT ALL PLUGS, AND CONNECTIONS CAN BE ACCESSED WITHOUT CONFLICTING THE LOAD SWITCHES, BIU'S OR OTHER EQUIPMENT IN THE CABINET.

ALL EQUIPMENT IN THE CABINET SHALL BE CONNECTED TO A SHELF, SIDE-WALL, OR DIN RAIL, EXCEPT THE ON-STREET MASTER, CONTROLLER, MMU AND NEMA TS2 POWER SUPPLY.

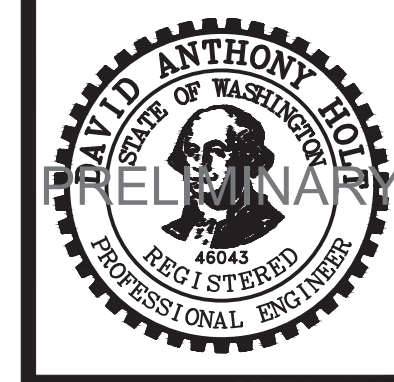
THE 2-POSITION CARD CAGE FOR ALL THE CABINETS SHALL BE DELIVERED WITH GPS TIME SOURCE, EVEN IF THE CABINET IS NOT TO BE DELIVERED WITH EITHER OF THESE PLUGGABLE COMPONENTS. THE CARD CAGE SHALL BE BOLTED TO THE SHELF.

COORDINATE WITH COMCAST FOR INSTALLATION OF CABLE DATA SERVICE.



NEMA "STRETCH P" CONTROLLER CABINET LAYOUT

CONTROLLER CABINET AND TRAFFIC SIGNAL WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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BJ/BMK/ASW

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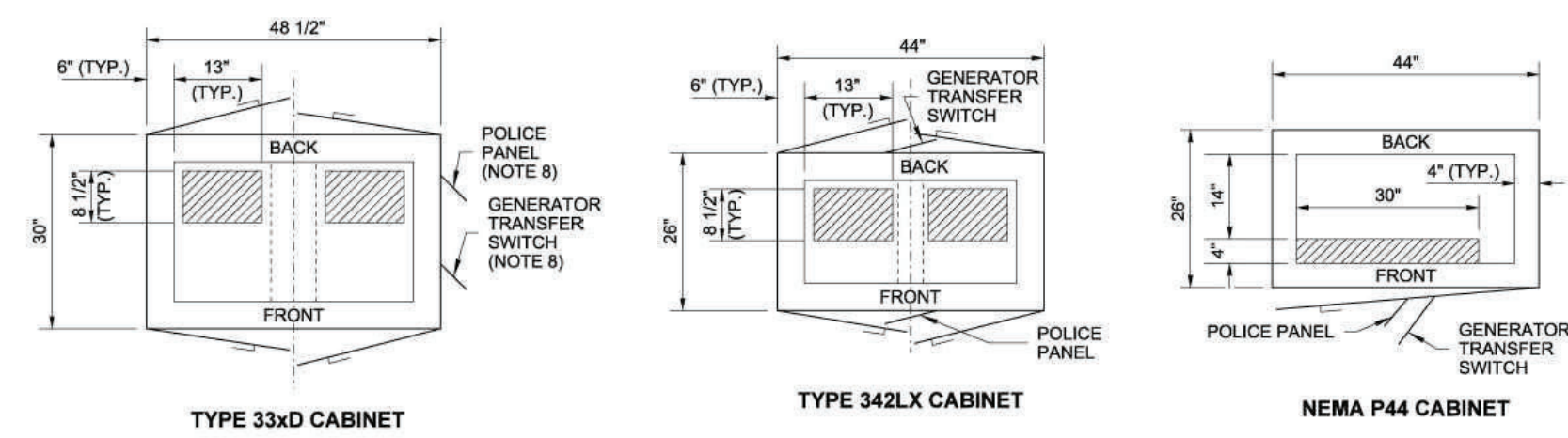
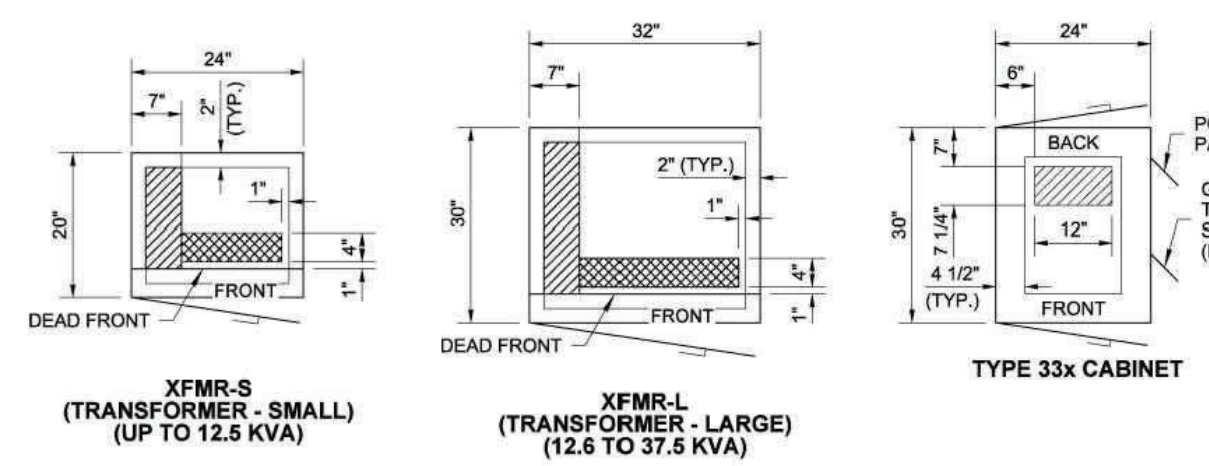
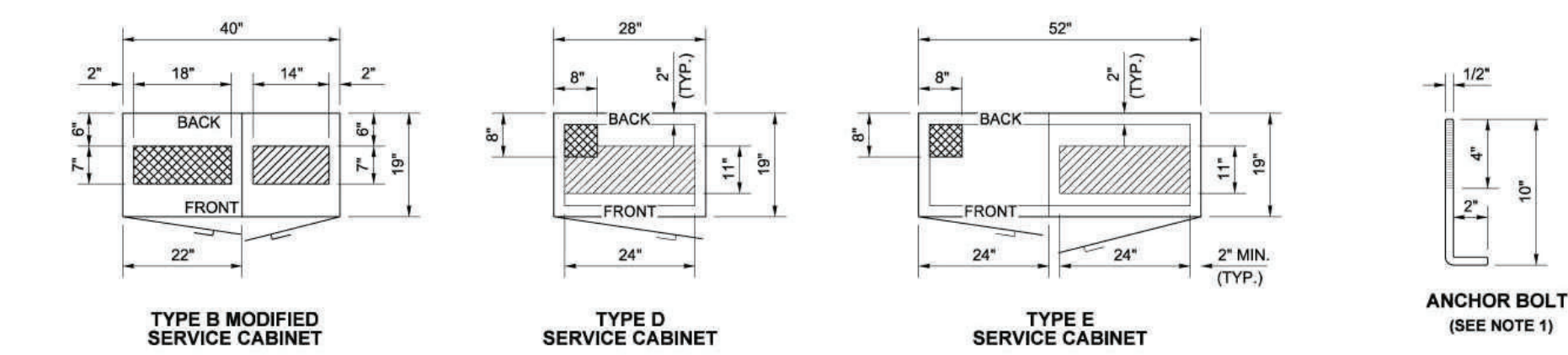
MAY 2024
71488-000

SHEET ID
TL09

SHEET **30** OF **50**

FINAL PLANS

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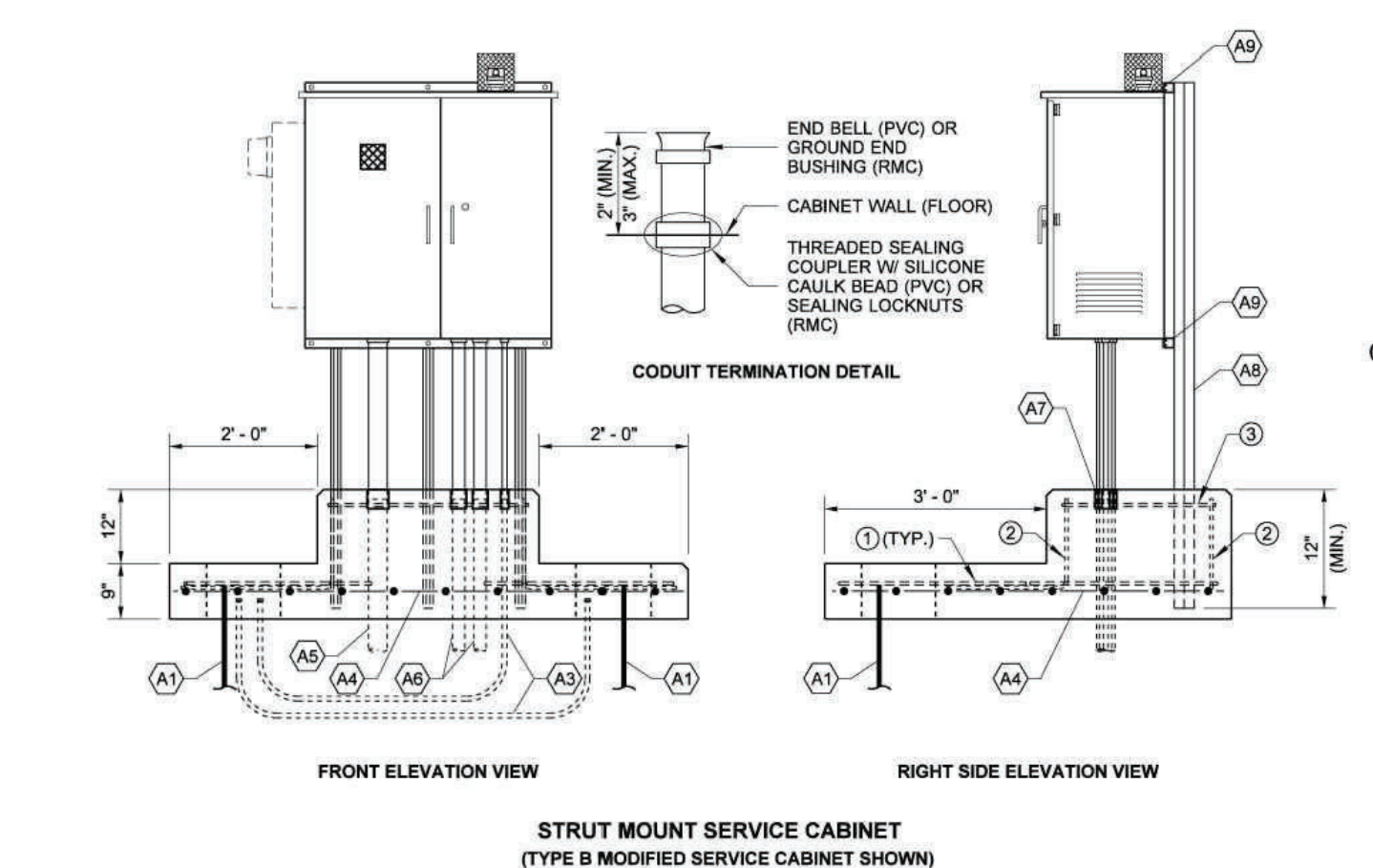
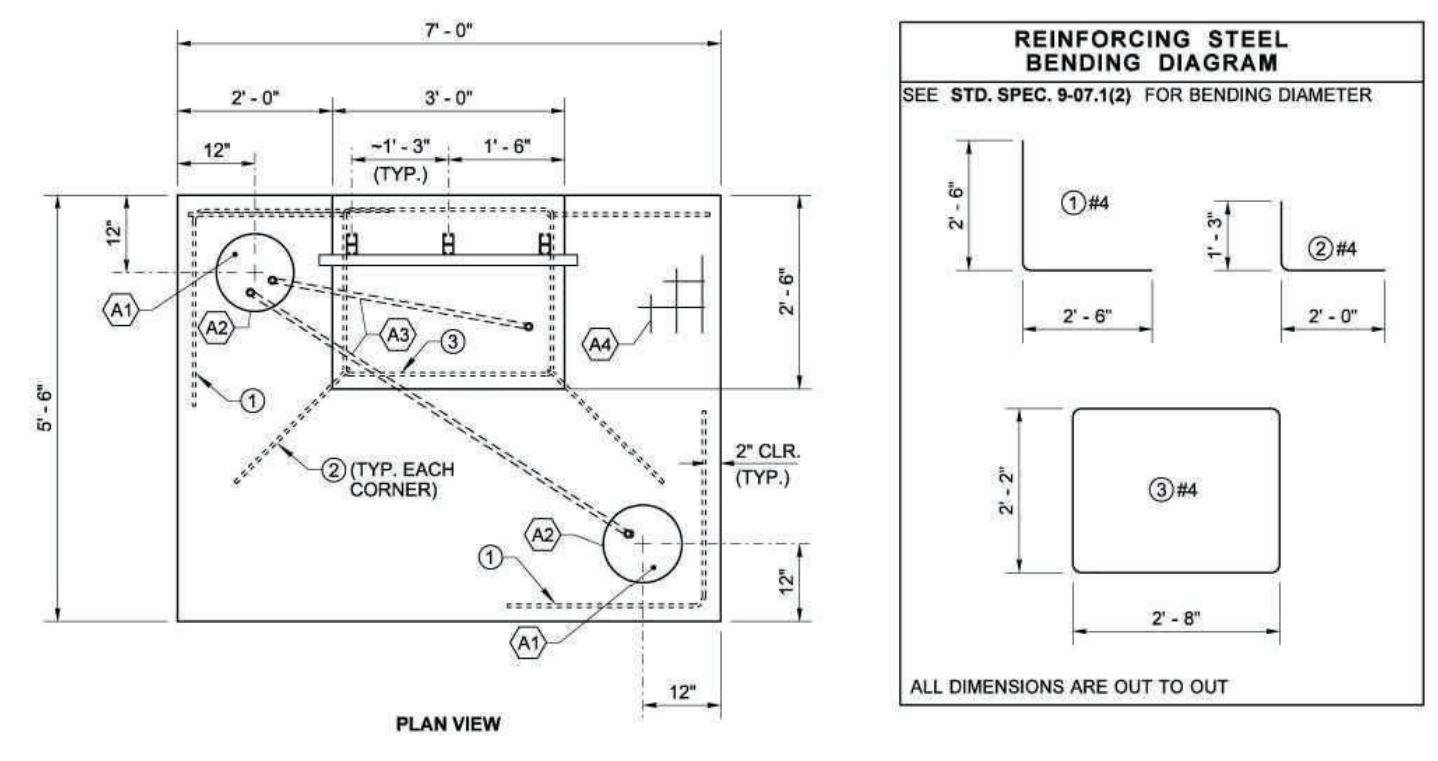
PLAN VIEWS
CABINET ORIENTATION, FOOTPRINT, AND CONDUIT PLACEMENT LOCATIONS

CABINET REFERENCE TABLE			
SERVICE CABINETS	SIZE W x D (IN)	CAPACITY CONDUIT DIAMETER (IN)	STANDARD PLAN
TYPE B MOD.	40" x 19"	12"	J-10.20
TYPE D	28" x 19"	24"	J-10.21
TYPE E	52" x 19"	48"	J-10.22
TRANSFORMER CABINETS			
SIGNAL AND ITS CABINETS	SIZE W x D (IN)	CAPACITY CONDUIT DIAMETER (IN)	STANDARD PLAN
XFMR-S (UP TO 12.5 KVA)	24" x 20"	12"	J-10.25
XFMR-L (12.6 TO 37.5 KVA)	32" x 30"	15"	J-10.25
TYPE 33x	24" x 30"	12"	J-12.15
TYPE 33xD	48.5" x 30"	24"	J-12.16
TYPE 342LX	44" x 26"	24"	J-12.16
NEMA P44	44" x 26"	15"	N/A

12" (IN) OF CONDUIT IN EACH LOCATION SHOWN

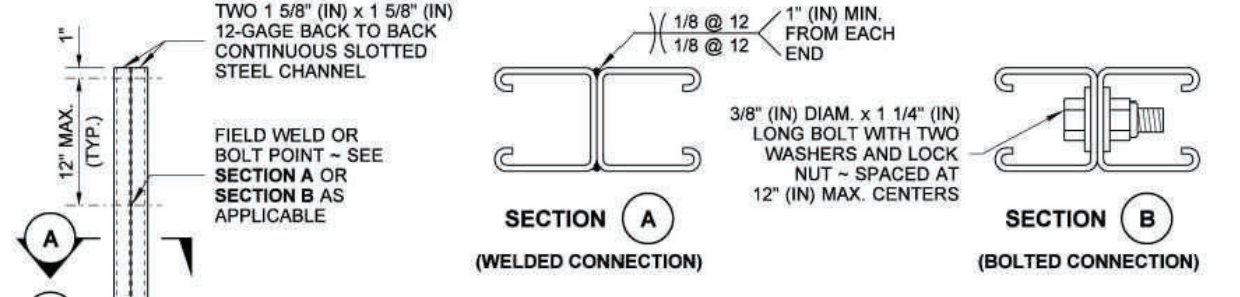
- GENERAL NOTES**
- Each pad mounted cabinet shall be attached to the foundation with four 1/2" (in.) x 10" (in.) x 2" (in.) x 4" (in.) anchor bolts (see Anchor Bolt Detail this sheet). Bolts, washers, and nuts shall be hot-dip galvanized in accordance with AASHTO M232 and meet the requirements of Standard Specification 9-05.5(1). Stainless steel epoxy anchors may be used as an alternative, and shall be 1/2" (in.) diameter x 9" (in.) or 5/8" (in.) diameter x 8" (in.). Epoxy anchors shall use Type 304 stainless steel hardware: ASTM F593 all threaded rod, ASTM A240 washers, and ASTM F594 nuts. Anchor bolts shall extend 1 1/2" (in.) min. to 2" (in.) max. above the concrete pad.
 - All reinforcing steel shall be embedded 2" (in.) below the surface of concrete.
 - A 1/2" (in.) bead of silicone is required between each cabinet and the concrete foundation.
 - Concrete shall be Class 3000, in accordance with Standard Specification 9-20.3(4). All concrete corners shall have a 1" (in.) chamfer, unless abutting sidewalk, where it shall be square and separated from the sidewalk with joint filler.
 - Foundations installed in, or adjacent to, sidewalks shall be constructed with the top flush with the sidewalk surface and grade, not including concrete risers for cabinets.
 - Foundations require additional level clear space to achieve a minimum of 4 feet of level clear space between the face of any cabinet or cabinet riser and the edge of the level clear space. Clear space beyond the edge of the concrete pad shall be made up of crushed surfacing meeting the requirements of Standard Specification 9-03.9(1). Special design may be required where slopes are 3H:1V or steeper. As an alternative, the concrete pad may be extended out to provide the required clear space.
 - Verify overall pad and concrete riser dimensions with the Engineer prior to placing concrete.
 - Not all Type 33x and 33xD cabinets have a police panel and/or a generator transfer switch (GTS) panel. See Contract for specific cabinet requirements.

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CABINET ORIENTATION
CONDUIT LAYOUT AND
FOUNDATION DETAIL

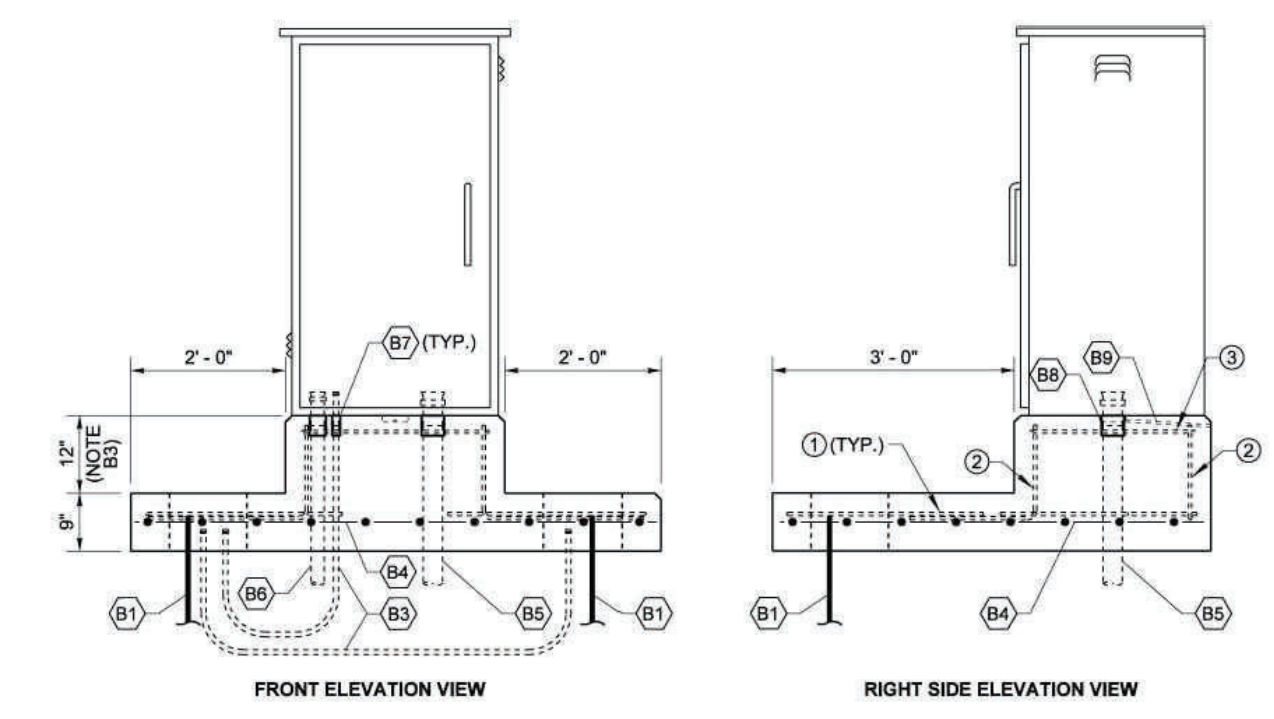
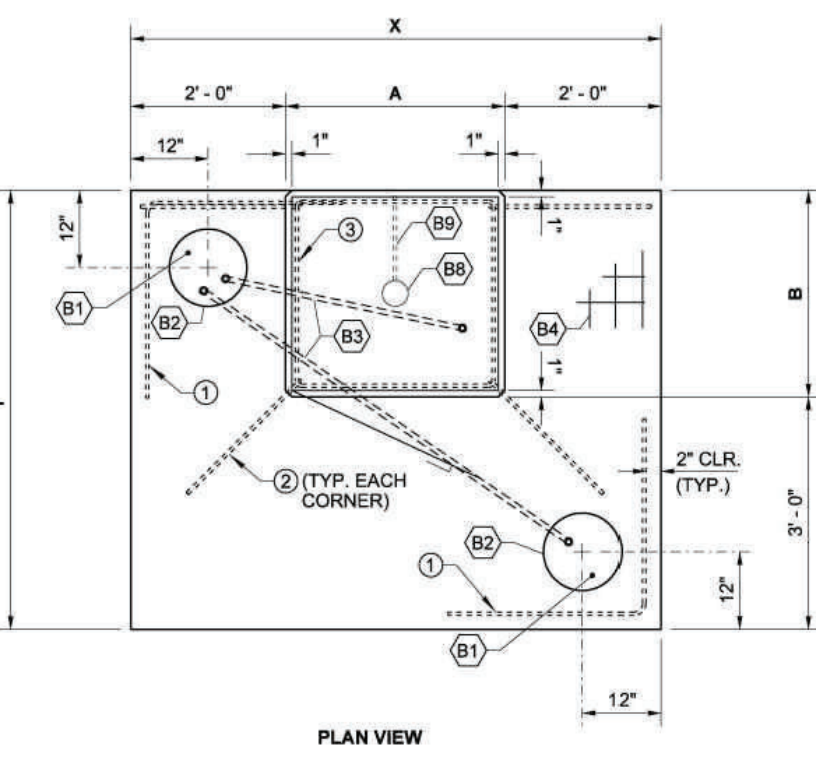
- NOTES - SINGLE STRUT MOUNT CABINET (SHEET 2 OF 6)**
- Drive ground rods before placing concrete. Ground rods shall be a minimum of 6 feet apart. See Standard Plan J-60.05 for additional details.
 - Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) - W4.0 x W4.0 - meeting the requirements of Standard Specification 9-07.7. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.
 - Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.
 - Vertical steel supports shall be two continuous 1 5/8" (in.) x 1 5/8" (in.) 12-gage slotted steel channels installed back-to-back (3 pairs required) - see Strut Mount Support Details this sheet for connection details. As an alternative, continuous 1 5/8" (in.) x 3 1/4" (in.) 12-gage slotted steel channel may be used in place of each channel pair. Channels shall be embedded a minimum of 12" (in.) into the concrete foundation. Supports shall be evenly spaced, with the center support centered in the concrete riser, and the outer supports tied to the riser rebar hoop.
 - Horizontal steel supports shall be continuous 1 5/8" (in.) x 1 5/8" (in.) 12-gage slotted steel channels (two required).
 - Cabinet height shall be determined by the required height of the utility meter - verify height with serving utility (typically 5 to 6 feet).
 - Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall still terminate in the utility section of the cabinet unless otherwise required by the utility.
 - Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the utility side of the cabinet pad. Final gravel area shall be a rectangle.



- KEY NOTES - SHEET 2 OF 6**
- (A1) Ground rod - See Note A1, this sheet.
 - (A2) Ground rod well (Ground tile) - 12" diameter concrete
 - (A3) Service ground electrode conduits.
 - (A4) Welded wire fabric - See Note A2, this sheet.
 - (A5) Utility entrance conduit. Conduit shall terminate in the utility section of the service cabinet.
 - (A6) Conduits to field equipment. Conduits shall terminate in the customer section of the service cabinet.
 - (A7) Conduit couplers - See Note A3, this sheet.
 - (A8) Vertical support steel channel - See Note A4, this sheet.
 - (A9) Horizontal support steel channel - See Note A5, this sheet.

CABINET ORIENTATION
CONDUIT LAYOUT AND
FOUNDATION DETAIL

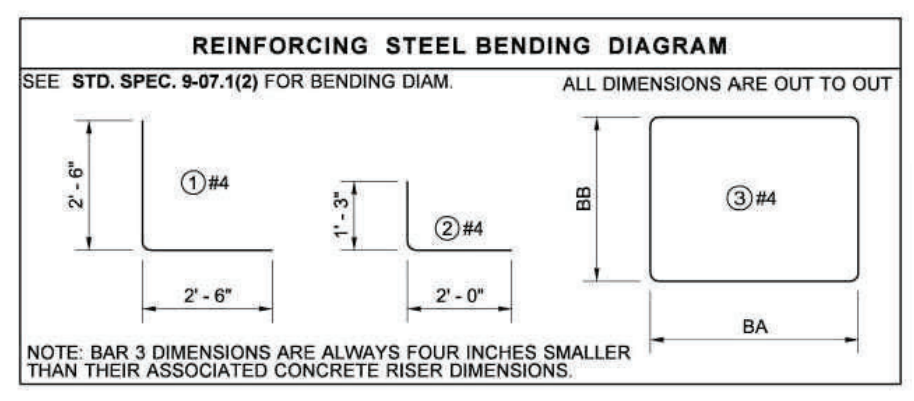
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SINGLE PAD MOUNT
SERVICE OR TRANSFORMER CABINET
(XFMR-L CABINET SHOWN)

- KEY NOTES - SHEET 3 OF 6**
- (B1) Ground rod - See Note B1, this sheet.
 - (B2) Ground rod well (Ground tile) - 12" diameter concrete
 - (B3) Service ground electrode conduits.
 - (B4) Welded wire fabric - See Note B2, this sheet.
 - (B5) Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high-voltage section of the cabinet (as applicable).
 - (B6) Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.
 - (B7) Conduit couplers - See Note B4, this sheet.
 - (B8) 4" (in.) diam. x 1/2" (in.) deep sump. Slope foundation within cabinet footprint toward sump.
 - (B9) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.).

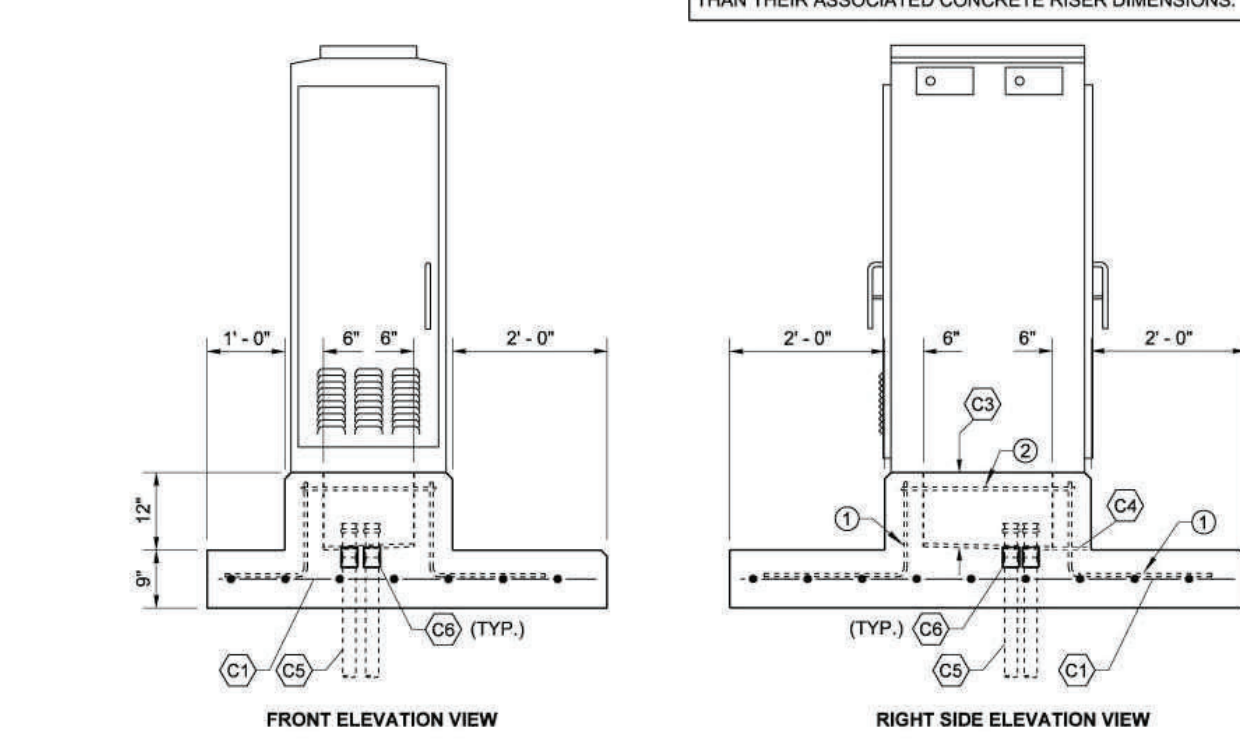
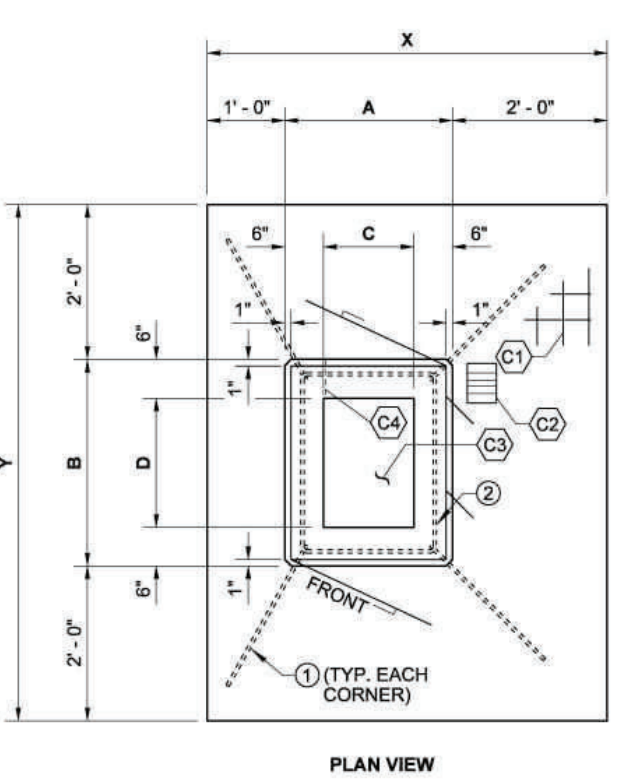
FOUNDATION SIZE REFERENCE TABLE						
SERVICE CABINETS	PAD WIDTH (X)	PAD DEPTH (Y)	RISER WIDTH (A)	RISER DEPTH (B)	HOOP (2) WIDTH (BA)	HOOP (3) DEPTH (BB)
TYPE D	6'-4"	3'-8"	N/A	N/A	N/A	N/A
TYPE E	8'-4"	3'-8"	N/A	N/A	N/A	N/A
TRANSFORMER CABINETS						
SIGNAL AND ITS CABINETS	PAD WIDTH (X)	PAD DEPTH (Y)	RISER WIDTH (A)	RISER DEPTH (B)	HOOP (2) WIDTH (BA)	HOOP (3) DEPTH (BB)
XFMR-S (UP TO 12.5 KVA)	6'-2"	4'-11"	2'-2"	1'-11"	1'-10"	1'-7"
XFMR-L (12.6 TO 37.5 KVA)	6'-10"	5'-8"	2'-10"	2'-8"	2'-6"	2'-4"



CABINET ORIENTATION
CONDUIT LAYOUT AND
FOUNDATION DETAIL

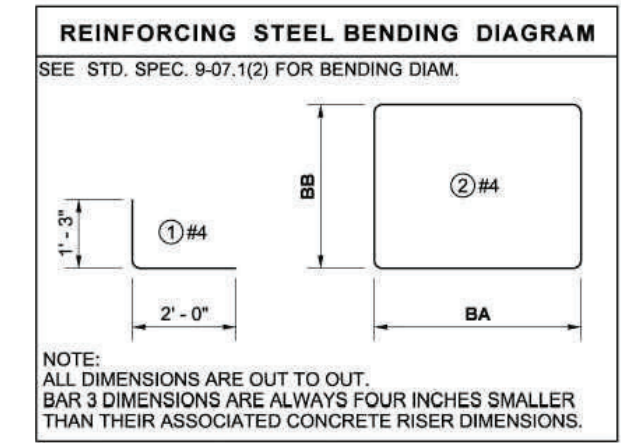
- NOTES - SINGLE PAD MOUNT SERVICE OR TRANSFORMER CABINET (SHEET 3 OF 6)**
- Drive ground rods before placing concrete. Ground rods shall be a minimum of 6 feet apart. See Standard Plan J-60.05 for additional details.
 - Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) - W4.0 x W4.0 - meeting the requirements of Standard Specification 9-07.7. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.
 - Omit concrete riser and bar #3 for Type D and Type E service cabinets.
 - Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.
 - Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground bushing (RMC).
 - Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall still terminate in the utility section of the cabinet unless otherwise required by the utility.
 - Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the side of the cabinet pad where the meter is installed. Final gravel area shall be a rectangle.
 - See Standard Plan J-10.14 for additional details when service or transformer cabinet is installed in fence line.

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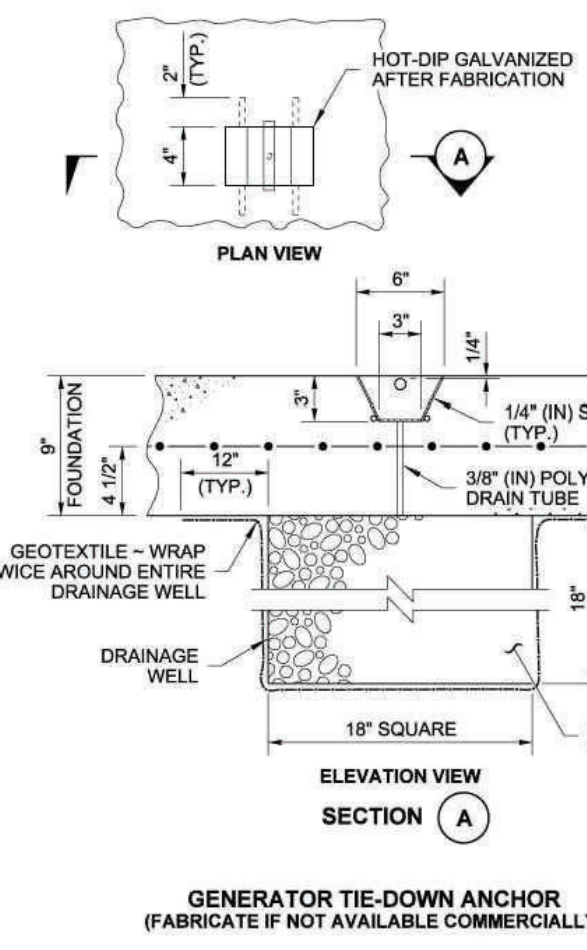
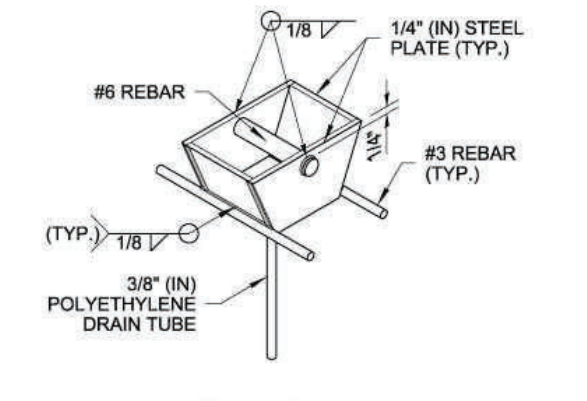


SINGLE PAD MOUNT
TRAFFIC SIGNAL OR ITS CABINET
(TYPE 33x CABINET SHOWN)

- KEY NOTES - SHEET 4 OF 6**
- (C1) Welded wire fabric - See Note C1, this sheet.
 - (C2) Generator Tie-Down Anchor - See Note C2, this sheet.
 - (C3) Cabinet Well - See Note C3, this sheet.
 - (C4) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.).
 - (C5) Conduits - See Contract Plans for number, type, and function.
 - (C6) Conduit couplers - See Note C4, this sheet.



NOTE: ALL DIMENSIONS ARE OUT TO OUT. BAR 3 DIMENSIONS ARE ALWAYS FOUR INCHES SMALLER THAN THEIR ASSOCIATED CONCRETE RISER DIMENSIONS.



GENERATOR TIE-DOWN ANCHOR
(FABRICATE IF NOT AVAILABLE COMMERCIALY)

- NOTES - SINGLE PAD MOUNT TRAFFIC SIGNAL OR ITS CABINET (SHEET 4 OF 6)**
- Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) - W4.0 (in.) x W4.0 (in.) - meeting the requirements of Standard Specification 9-07.7. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.
 - Generator Tie-Down Anchors are only required for cabinets with Generator Transfer Switches (GTS). Anchor shall along the side of the cabinet near the back corner of the cabinet riser as shown.
 - Cabinet well shall be a nominal 10" (in.) deep, sloping towards the corner where the drain tube is installed. Well dimensions are 12" (in.) smaller than the riser length and width dimensions (A and B). See Cabinet Well Reference Table, this sheet.
 - Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.
 - Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground bushing (RMC).
 - Additional gravel pad not shown. Gravel pad shall extend two feet beyond the front, right, and back of the cabinet pad where the pad is two feet wide. Final gravel area shall be a rectangle.

CABINET WELL REFERENCE TABLE		
SIGNAL AND ITS CABINETS	WELL WIDTH (C)	WELL LENGTH (D)
TYPE 33x	1'-2"	1'-8"
TYPE 33xD	3'-2"	1'-8"
TYPE 342LX / NEMA P44	2'-10"	1'-4"

FOUNDATION SIZE REFERENCE TABLE						
SIGNAL AND ITS CABINETS	PAD WIDTH (X)	PAD DEPTH (Y)	RISER WIDTH (A)	RISER DEPTH (B)	HOOP (2) WIDTH (BA)	HOOP (3) DEPTH (BB)
TYPE 33x	5'-2"	6'-8"	2'-2"	2'-8"	1'-10"	2'-4"
TYPE 33xD	6'-3"	6'-8"	4'-3"	2'-8"	3'-11"	2'-4"
TYPE 342LX / NEMA P44	5'-10"	6'-4"	3'-10"	2'-4"	3'-6"	2'-0"

CABINET ORIENTATION
CONDUIT LAYOUT AND
FOUNDATION DETAIL

TRAFFIC SIGNAL WSDOT DETAILS FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



PRELIMINARY

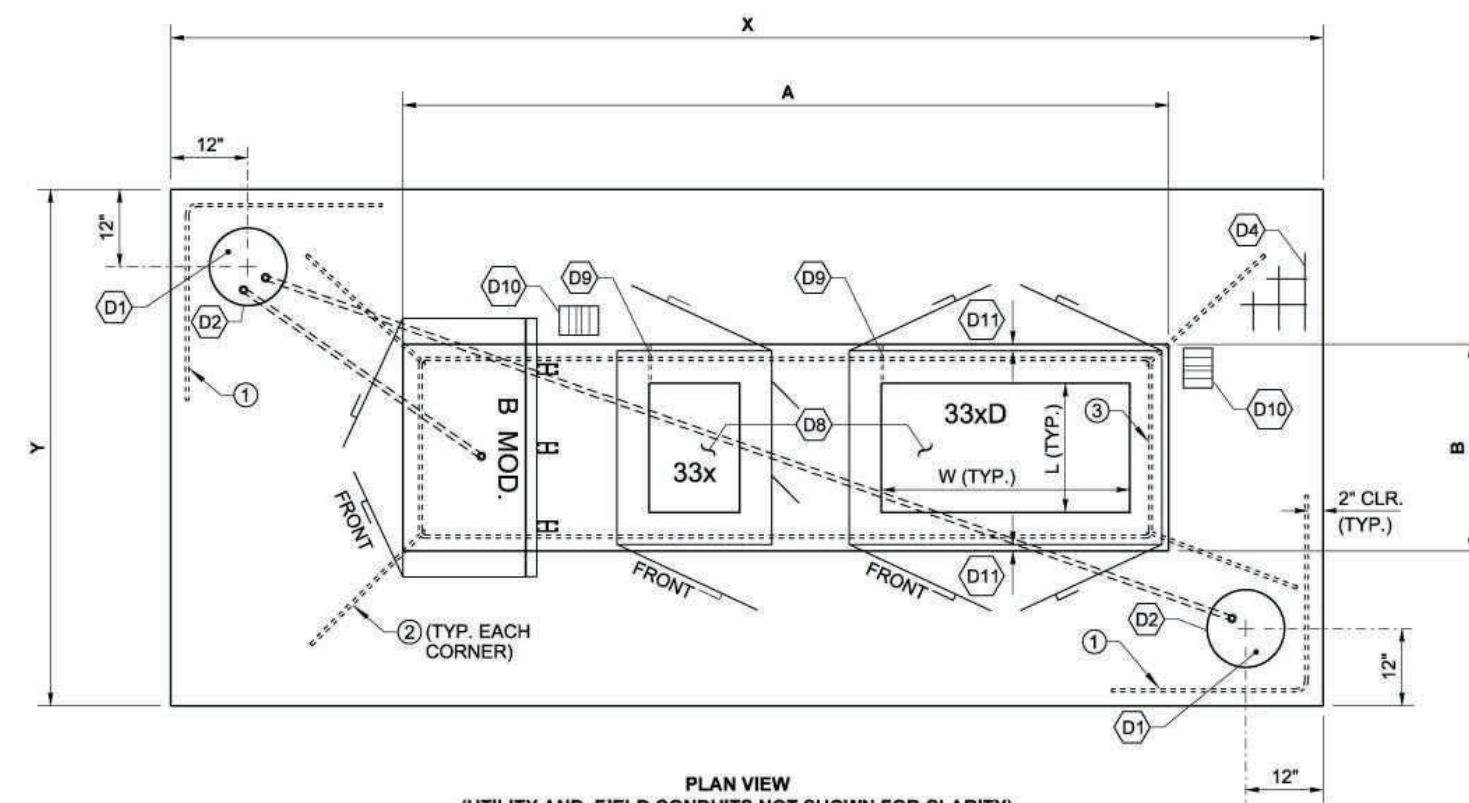
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SHEET 31 OF 50

FINAL PLANS

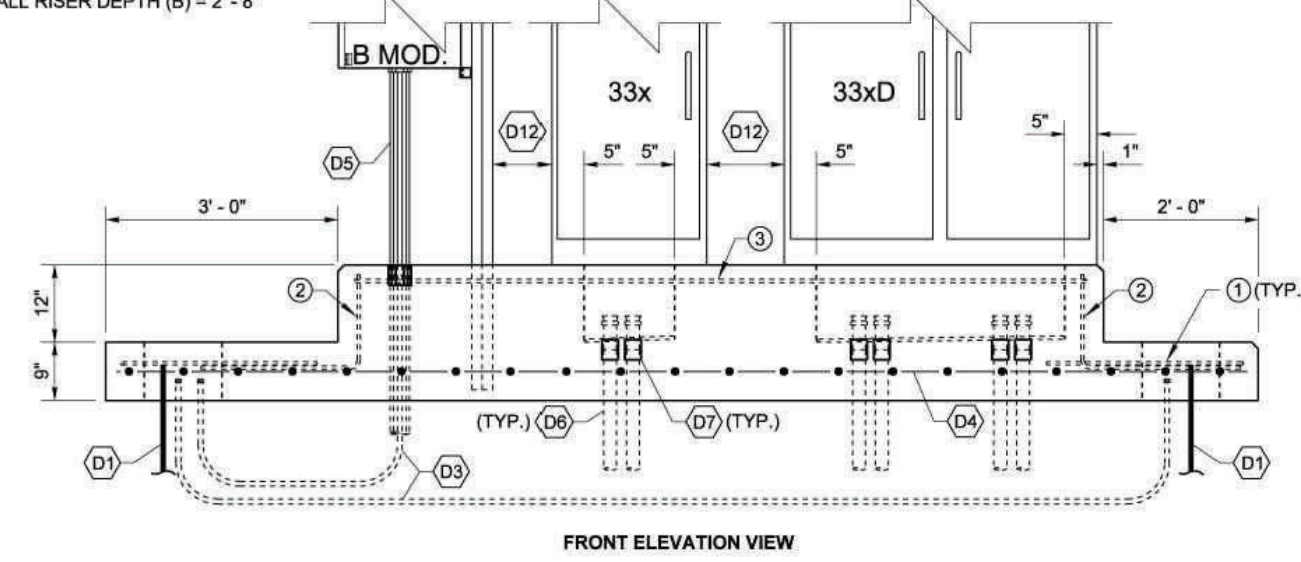
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PLAN VIEW
(UTILITY AND FIELD CONDUITS NOT SHOWN FOR CLARITY)

FOR THE EXAMPLE PAD SHOWN HERE:
 - SPACE BETWEEN TYPE B MOD. CABINET AND 33x CABINET IS 6" (IN.)
 - SPACE BETWEEN 33x AND 33xD CABINET IS 1'-0"
 - OVERALL PAD WIDTH (X) = 14'-8"
 - OVERALL PAD DEPTH (Y) = 6'-8"
 - OVERALL RISER WIDTH (A) = 8'-8"
 - OVERALL RISER DEPTH (B) = 2'-8"

FOUNDATION PAD DIMENSIONS X, Y, A, AND B SHOULD BE PROVIDED IN THE CONTRACT PLANS.



FRONT ELEVATION VIEW
 TYPE A (NARROW) MULTI-CABINET FOUNDATION PAD
 (TYPE B MODIFIED SERVICE CABINET, TYPE 33x CABINET, AND TYPE 33xD CABINET SHOWN)

NOTES - TYPE A (NARROW) AND TYPE B (WIDE) MULTI-CABINET FOUNDATION PAD (SHEETS 5 AND 6 OF 6)

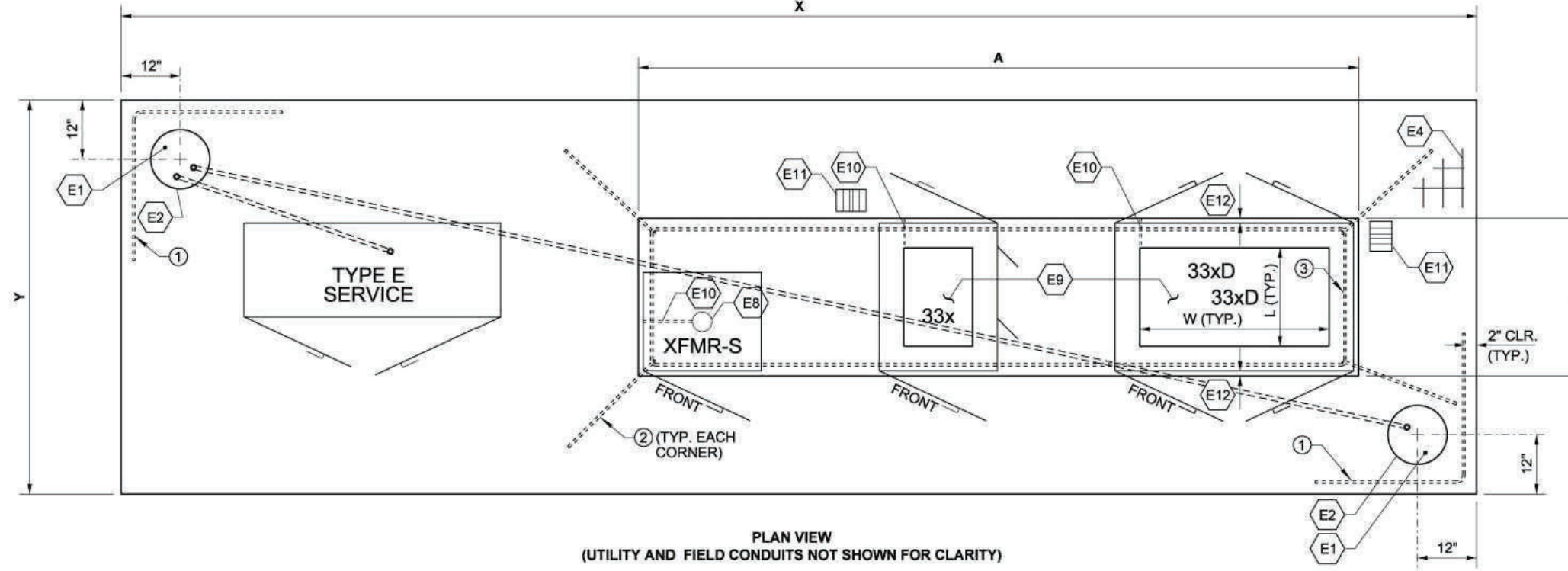
- D1. Drive ground rods before placing concrete. Ground rods shall be a minimum of 6 feet apart. See Standard Plan J-60.05 for additional details.
- D2. Welded Wire Fabric (WWF) shall be 4.0 (in.) x 4.0 (in.) ~ W4.0 x W4.0 ~ meeting the requirements of Standard Specification 9-07.7. As an alternative, a grid of #3 rebar may be used, with bars spaced at 1'-0" centers laterally and longitudinally.
- D3. See Sheet 3 for reinforcing steel bending diagrams.
- D4. Concrete riser shall not include Type D or Type E Service Cabinets.
- D5. Install conduit couplings on all conduits. Couplers shall be installed with the top of the coupler flush with the top of concrete. For PVC conduits, the conduit segment above the coupler shall not be glued to the coupler.
- D6. Conduits shall extend a minimum of 2" (in.) and a maximum of 3" (in.) into the cabinet, as measured from the concrete surface to the top of the end bell (PVC) or ground busting (RMC).
- D7. Serving utility may require meter socket to be installed on the outside of the cabinet. Utility feeder conduit shall terminate in the utility section of the cabinet unless otherwise required by the utility.
- D8. Additional gravel pad not shown. Gravel pad shall extend two feet in front of the concrete pad for the full width of the concrete pad. If the utility meter socket is installed on the outside of the service cabinet, gravel pad shall also extend three feet from the side of the cabinet pad where the meter is installed. Final gravel area shall be a rectangle.
- D9. Cabinet wells shall be provided for all Type 33x, Type 33xD, Type 342LX, and NEMA P44 Cabinets. See Note C3 on sheet 4 for Cabinet Well dimensions.
- D10. At least one Generator Tie-Down Anchor shall be provided for each multi-cabinet pad foundation. A second Anchor shall be provided if there is a second cabinet with a Generator Transfer Switch (GTS). If a service or transformer cabinet is present, install one Anchor at either of the locations shown, closest to the cabinet with the GTS. If there is no service or transformer cabinet, install Anchors only at the ends of the cabinet riser.

KEY NOTES - SHEET 5 OF 6

- (D1) Ground rod - See Note D1, this sheet.
- (D2) Ground rod well (Ground tie) - 12" diameter concrete
- (D3) Service ground electrode conduits.
- (D4) Welded wire fabric - See Note D2, this sheet.
- (D7) Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high voltage section of the cabinet (as applicable).
- (D6) Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.
- (D7) Conduit couplers - See Note D5, this sheet.
- (D9) Cabinet Well - See Note D9, this sheet.
- (D8) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.)
- (D10) Generator Tie-Down Anchor - See Note D10, this sheet.
- (D11) Riser lip shall be 1" (in.) from the base edge of the largest cabinet to the face of the concrete riser. Smaller cabinets shall be positioned so that the front riser lip is 1" (in.) wide.
- (D12) For a Type A (Narrow) Pad, cabinet spacing shall be as follows:
 - a. 12" (in.) between cabinets where at least one cabinet has a police panel or GTS door.
 - b. 6" (in.) between cabinets where no police panel or GTS door is present.

CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

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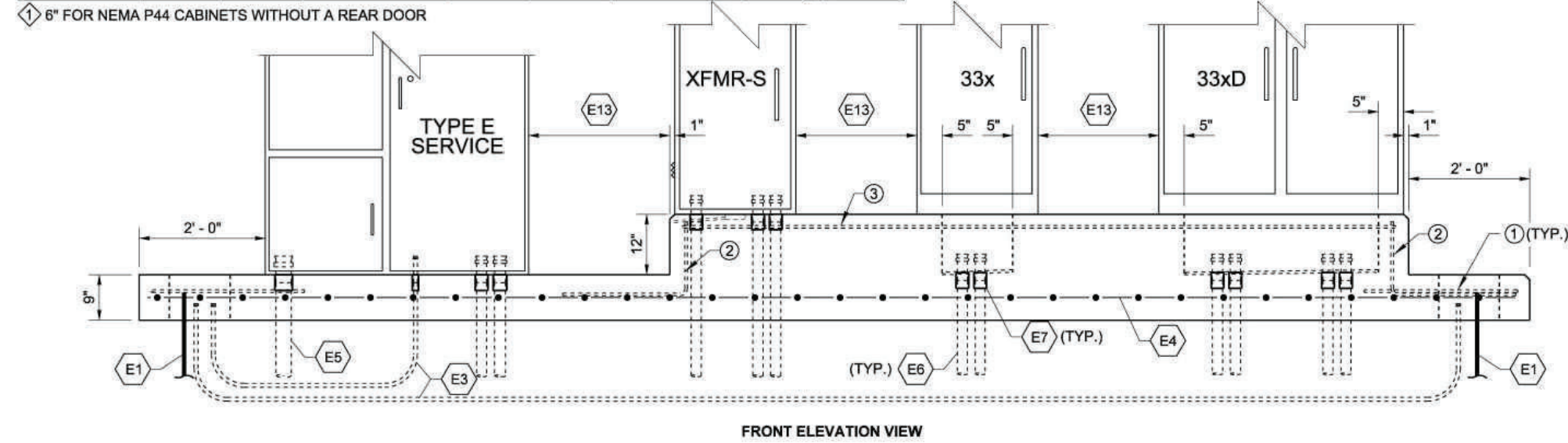
PLAN VIEW
(UTILITY AND FIELD CONDUITS NOT SHOWN FOR CLARITY)

CABINET CLEARANCE REFERENCE TABLE

SERVICE CABINETS	LEFT SIDE		RIGHT SIDE		TRANSFORMER CABINETS		LEFT SIDE		RIGHT SIDE		SIGNAL AND ITS CABINETS		LEFT SIDE		RIGHT SIDE		
	TYPE B MOD.	TYPE D	TYPE E	TYPE B MOD.	TYPE D	TYPE E	TYPE B MOD.	TYPE D	TYPE E	TYPE B MOD.	TYPE D	TYPE E	TYPE B MOD.	TYPE D	TYPE E	TYPE B MOD.	
	1'-10"	2'-4"	2'-0"	1'-6"	2'-4"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"

FOR THE EXAMPLE PAD SHOWN HERE:
 - SPACE BETWEEN TYPE E CABINET AND FACE OF CONCRETE RISER IS 2'-4"
 - SPACE BETWEEN XFMR-S CABINET AND 33x CABINET IS 2'-0"
 - OVERALL PAD WIDTH (X) = 22'-11"
 - OVERALL PAD DEPTH (Y) = 6'-8"
 - OVERALL RISER WIDTH (A) = 12'-3"
 - OVERALL RISER DEPTH (B) = 2'-8"

FOUNDATION PAD DIMENSIONS X, Y, A, AND B SHOULD BE PROVIDED IN THE CONTRACT PLANS.



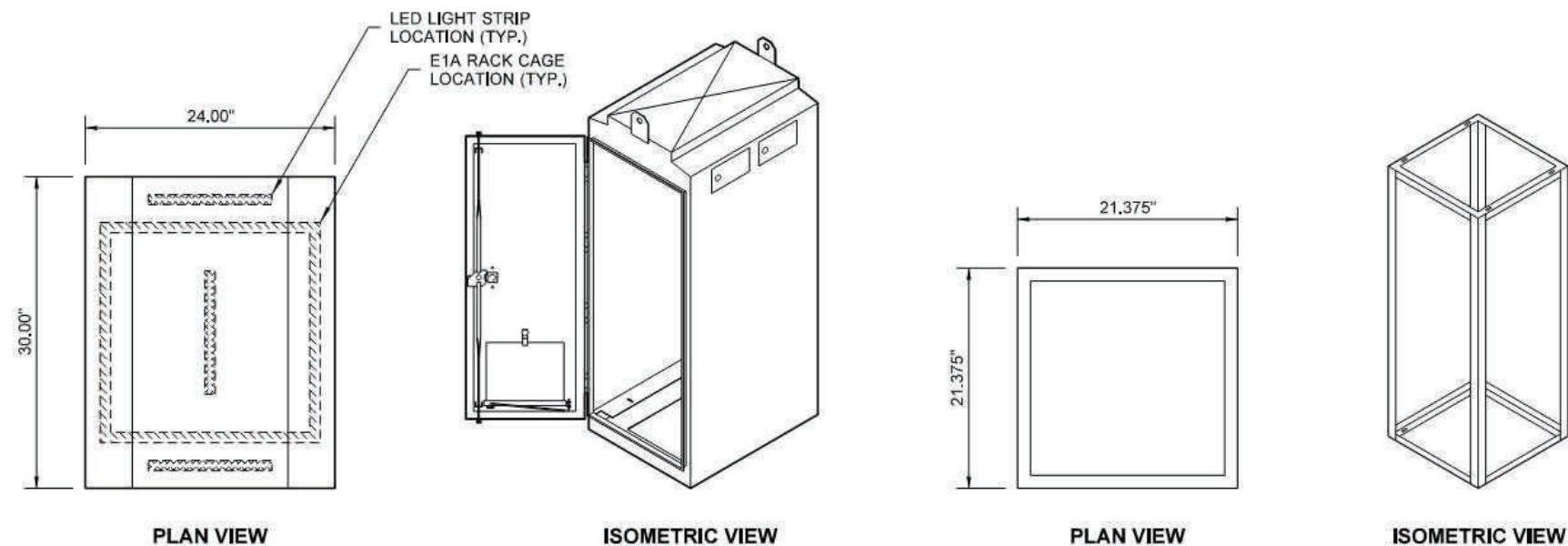
FRONT ELEVATION VIEW
 TYPE B (WIDE) MULTI-CABINET FOUNDATION PAD
 (TYPE E SERVICE CABINET, XFMR-S CABINET, TYPE 33x CABINET, AND TYPE 33xD CABINET SHOWN)

KEY NOTES - SHEET 6 OF 6

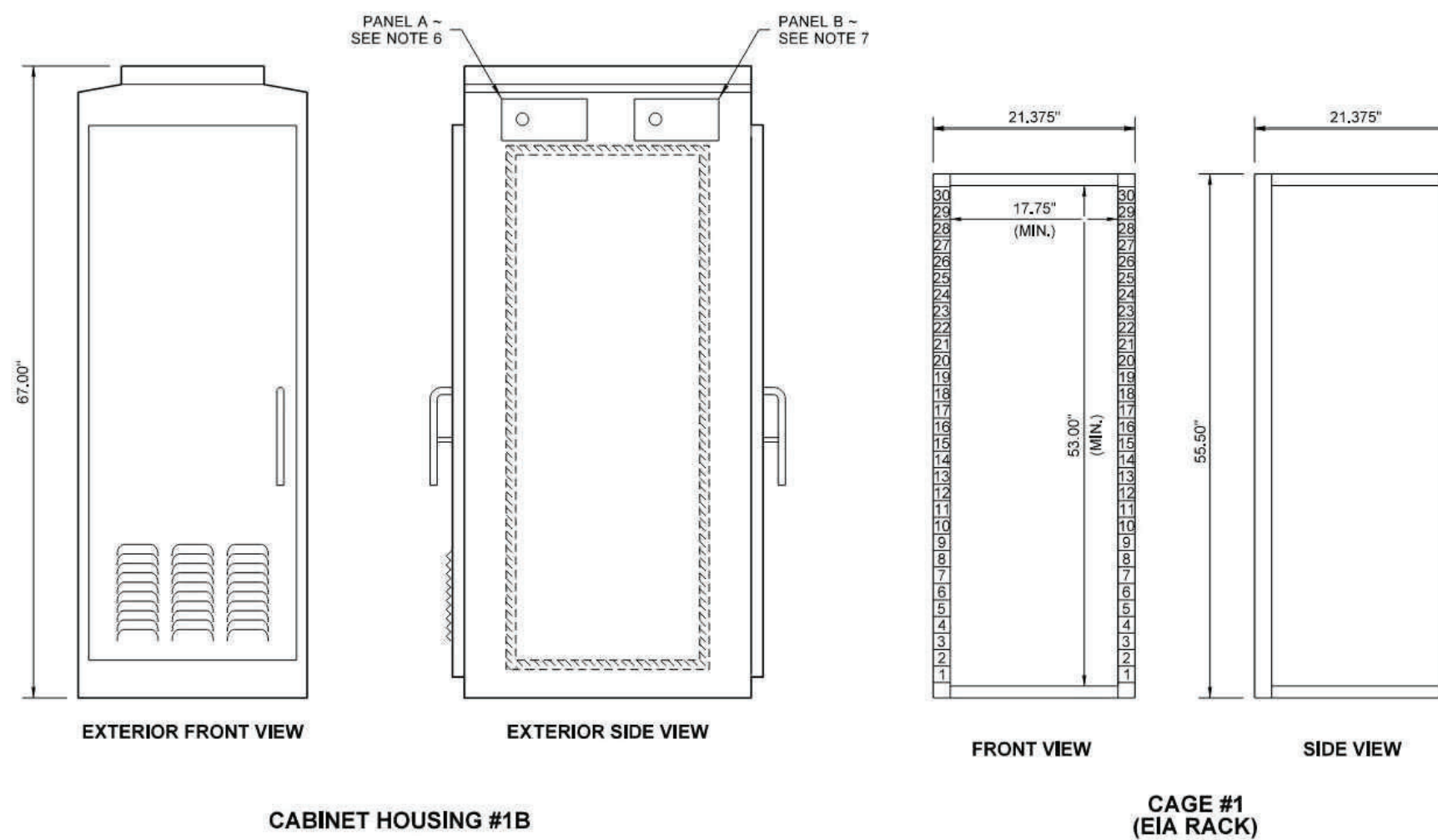
- (E1) Ground rod - See Note D1, Sheet 5 of 6.
- (E2) Ground rod well (Ground tie) - 12" diameter concrete
- (E3) Service ground electrode conduits.
- (E4) Welded wire fabric - See Note D2, Sheet 5 of 6.
- (E5) Utility entrance (service cabinet) or input power (transformer cabinet) conduit. Conduit shall terminate in the utility or high voltage section of the cabinet (as applicable).
- (E6) Conduits to field equipment. Conduits shall terminate in the customer section (service cabinet) or low-voltage (transformer cabinet) of the cabinet.
- (E7) Conduit couplers - See Note D5, Sheet 5 of 6.
- (E8) 4" (in.) diam. x 1/2" (in.) deep sump. Slope foundation within cabinet footprint toward sump.
- (E9) Cabinet Well - See Note D9, Sheet 5 of 6.
- (E10) 3/8" (in.) diam. polyethylene or copper tubing for drain. Tubing shall be straight, but slope downward a minimum of 1" (in.)
- (E11) Generator Tie-Down Anchor - See Note D10, Sheet 5 of 6.
- (E12) Riser lip shall be 1" (in.) from the base edge of the largest cabinet to the face of the concrete riser. Smaller cabinets shall be positioned so that the front riser lip is 1" (in.) wide.
- (E13) For a Type B (Wide) Pad, spacing between the cabinets shall match the widest door of the two adjacent cabinets. For Type D and Type E Service Cabinets, the clearance is to the face of the adjacent concrete riser (when present). See left and right clearance table this sheet.

CABINET ORIENTATION CONDUIT LAYOUT AND FOUNDATION DETAIL

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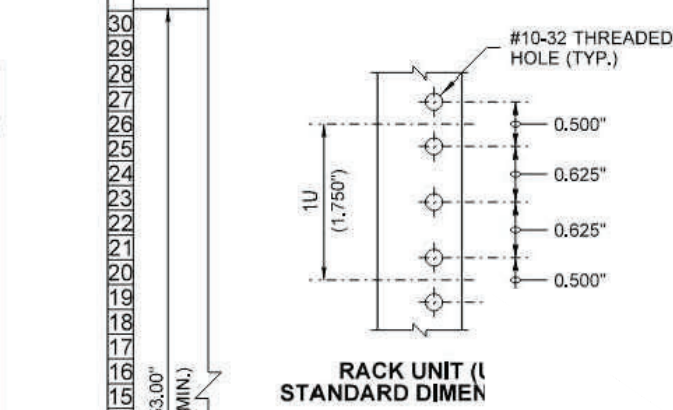
NOTE: DIMENSIONS NOT SHOWN SHALL BE IN ACCORDANCE WITH THE TEES



CABINET HOUSING #1B

CAGE #1 (EIA RACK)

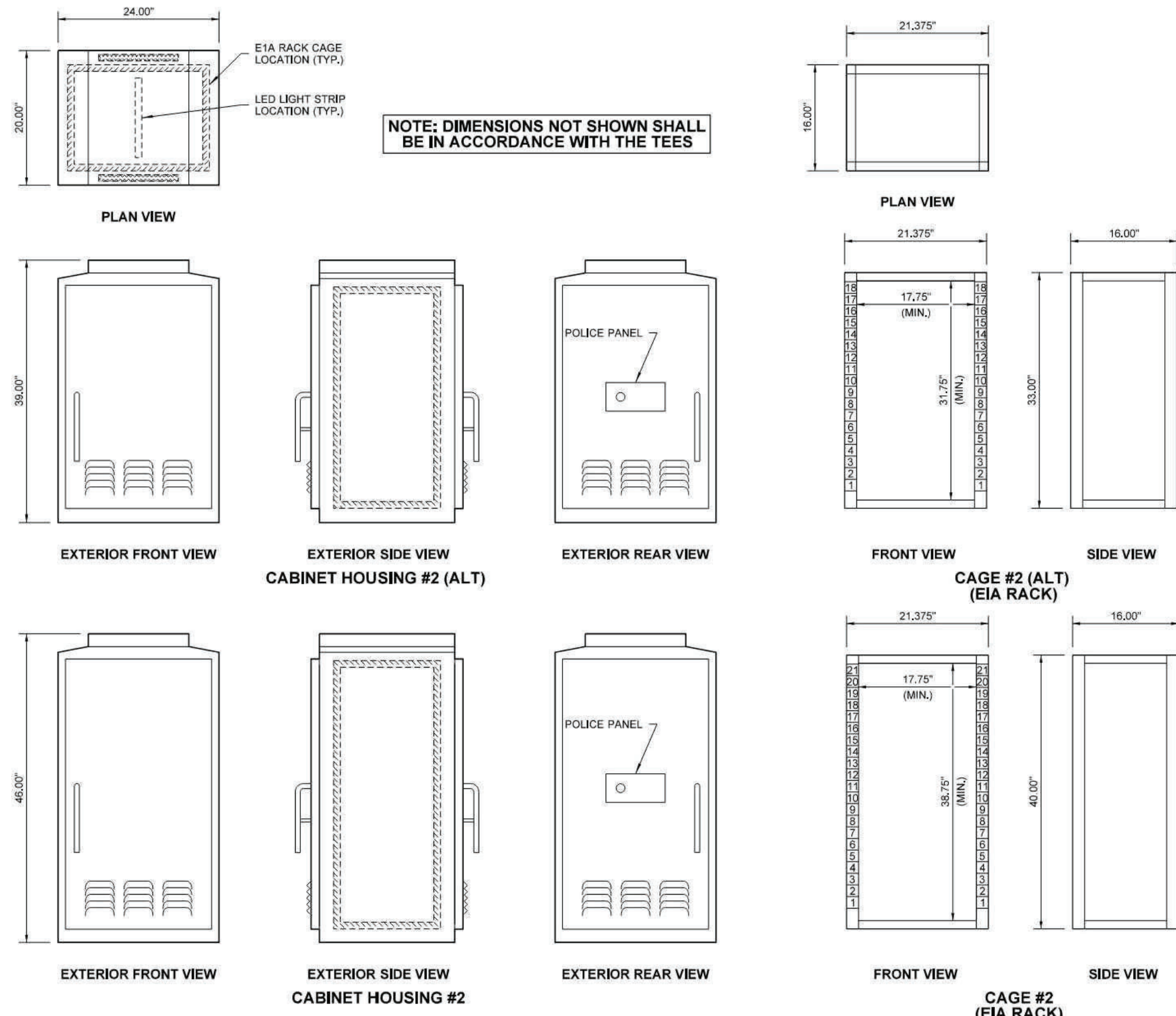
- NOTES**
1. Cabinet construction shall meet the requirements of Standard Specification Section 9-29.13(10). Aluminum cabinets shall have mill finish.
 2. Cabinet construction shall conform to the requirements of Chapter 6, Section 2, of the California Department of Transportation (CalTrans) Transportation Electrical Equipment Specifications (TEES) as currently published, including all errata, with modifications as described in Standard Specification Section 9-29.13(10).
 3. The Housing and Cage numbers refer to the designations shown in the TEES. Cabinet Housing #2 (ALT) and Cage #2 (ALT) are modified versions of Cabinet Housing #2 and Cage #2, respectively, using the shorter vertical dimensions shown. All other dimensions and features are the same.
 4. Housing #1B shall always use Cage #1. Housing #2 shall always use Cage #2. Housing #2 (ALT) shall always use Cage #2 (ALT).
 5. Cage mounting points are designated by rack units (U), which are numbered starting from the bottom of the cage.
 6. Install the following in PANEL A location for the applicable cabinet type:
 - Type 331L and 334L Cabinets: Do not install PANEL A.
 - Type 332L Cabinets: Install Generator Transfer Switch.
 7. Install the following in PANEL B location for the applicable cabinet type:
 - Type 331L Cabinets: Install Generator Transfer Switch when specified in the contract.
 - Type 332L and 334L Cabinets: Install Police Panel.
 8. All cabinet locks shall accept Best 6-pin or 7-pin cores, with the exception of the Police Panel. The Police Panel shall use a standard Police Panel Lock and Keys.



RACK UNIT NUMBERING EXAMPLE
 SEE NOTE 5

TYPE 33xL SINGLE-WIDTH CABINET HOUSING

DRAWN BY: BILL BERENS



EXTERIOR FRONT VIEW

EXTERIOR SIDE VIEW
 CABINET HOUSING #2 (ALT)

EXTERIOR REAR VIEW

FRONT VIEW

SIDE VIEW

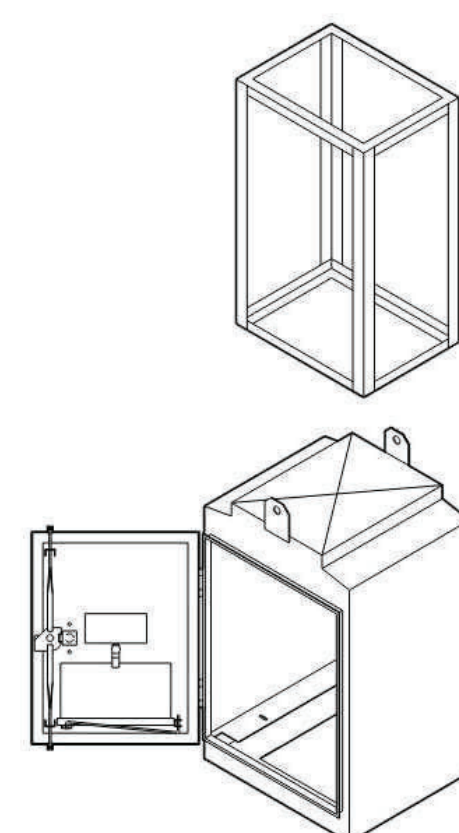
EXTERIOR FRONT VIEW

EXTERIOR SIDE VIEW
 CABINET HOUSING #2

EXTERIOR REAR VIEW

FRONT VIEW

SIDE VIEW



ISOMETRIC VIEWS
 (HOUSING #2 (ALT) AND CAGE #2 (ALT) SHOWN)

TYPE 33xL SINGLE-WIDTH CABINET HOUSING

TRAFFIC SIGNAL WSDOT DETAILS FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



PRELIMINARY

DESIGNED: BJ/PPG
 CHECKED: DAH
 MAY 2024
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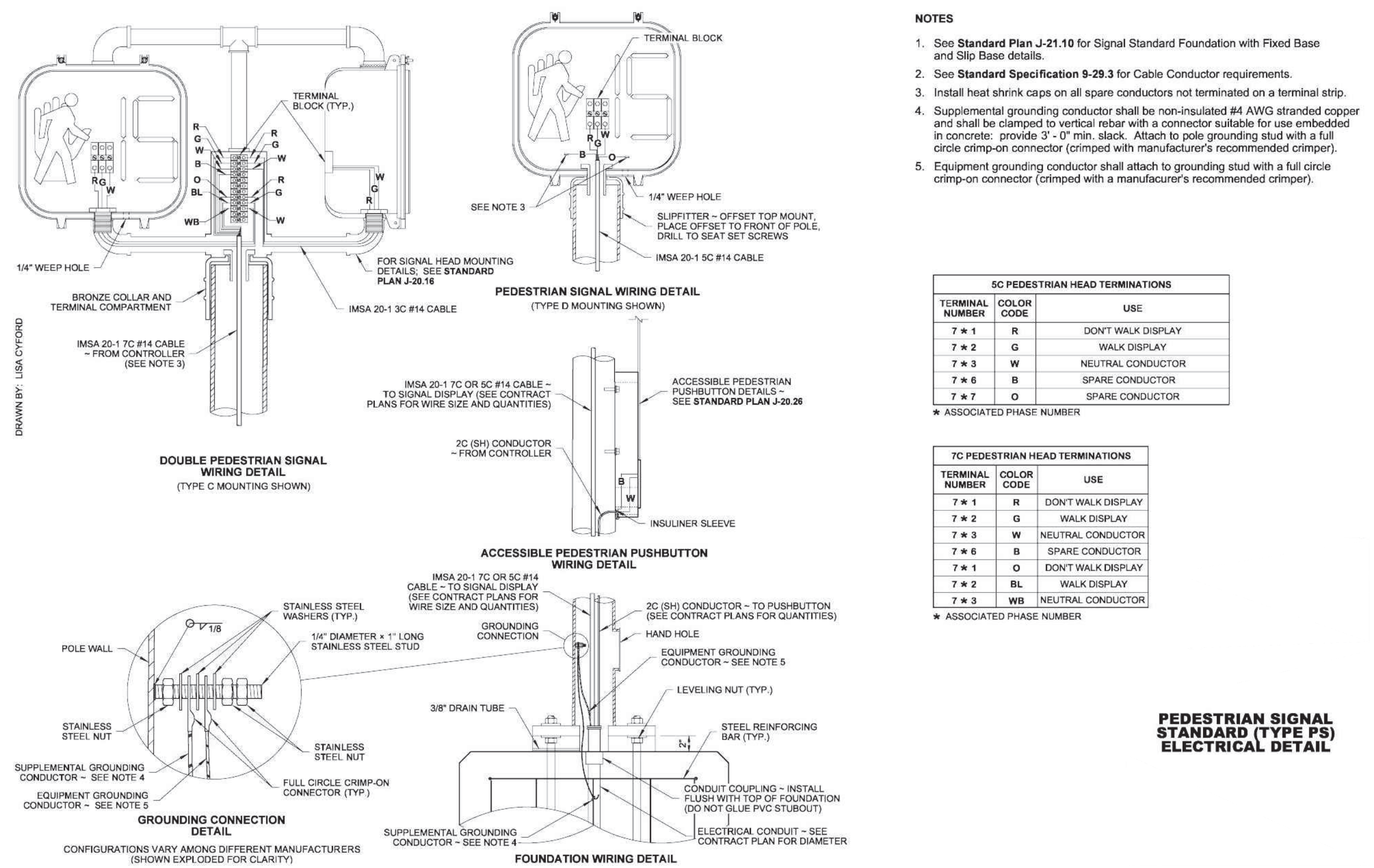
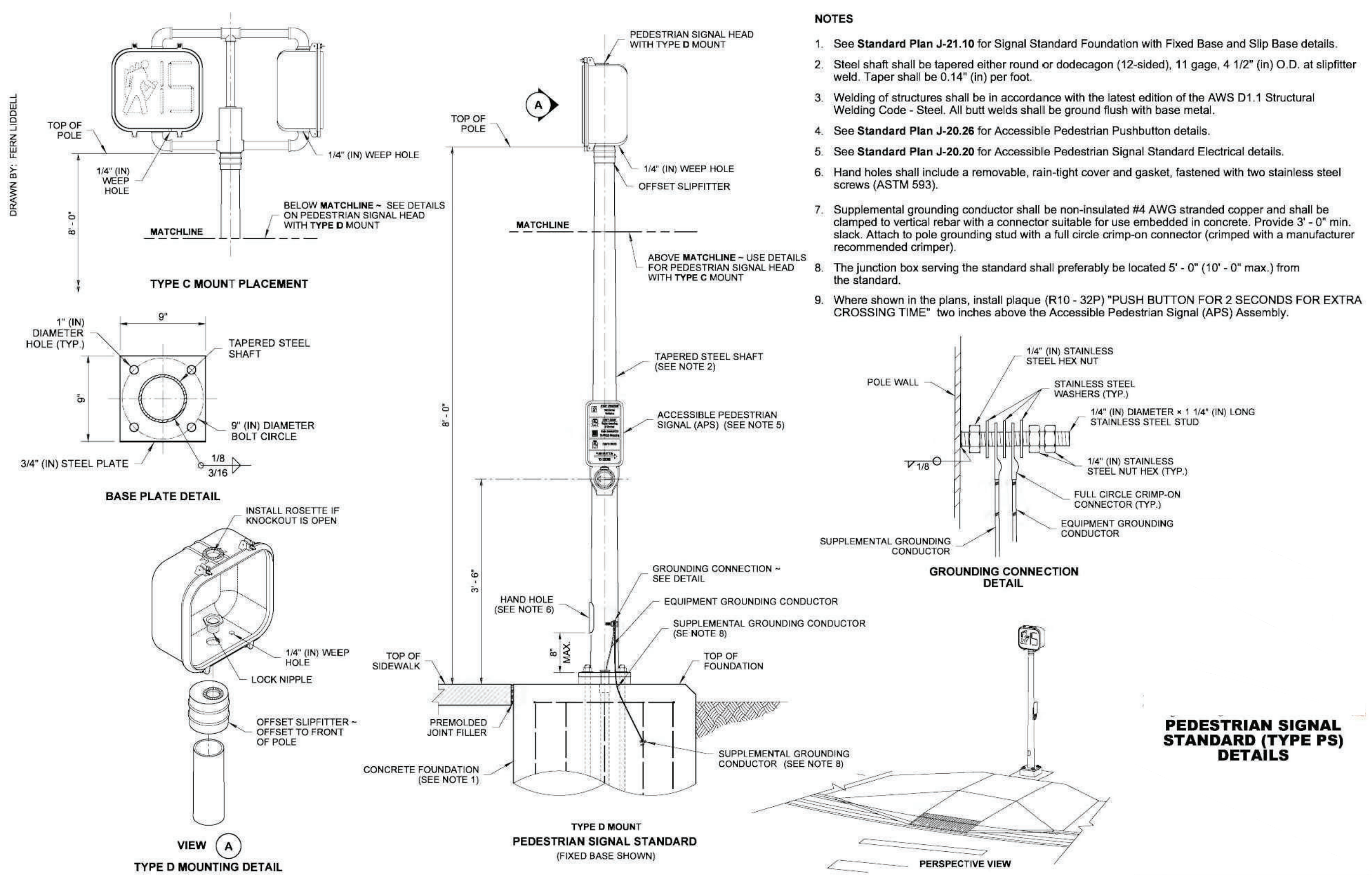
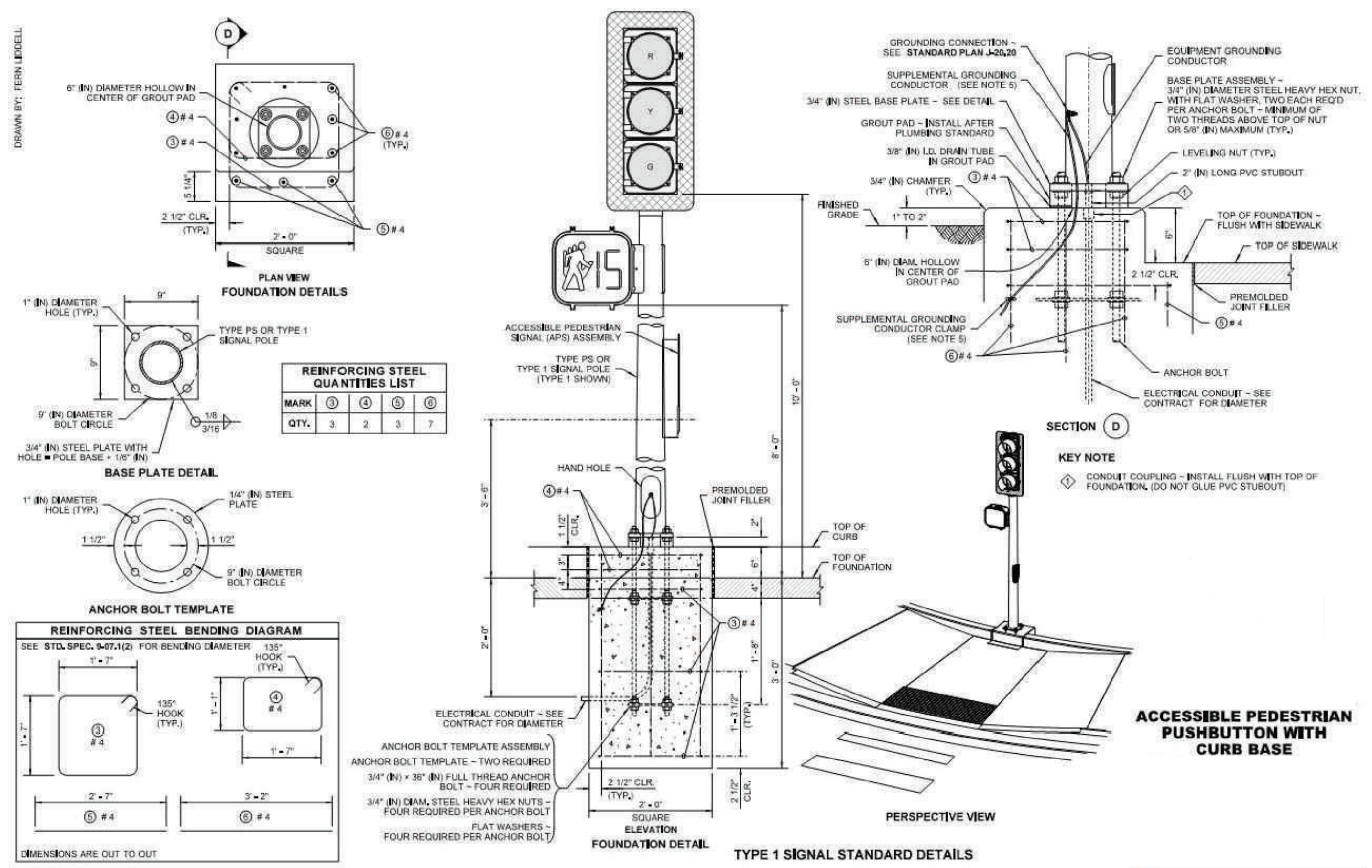
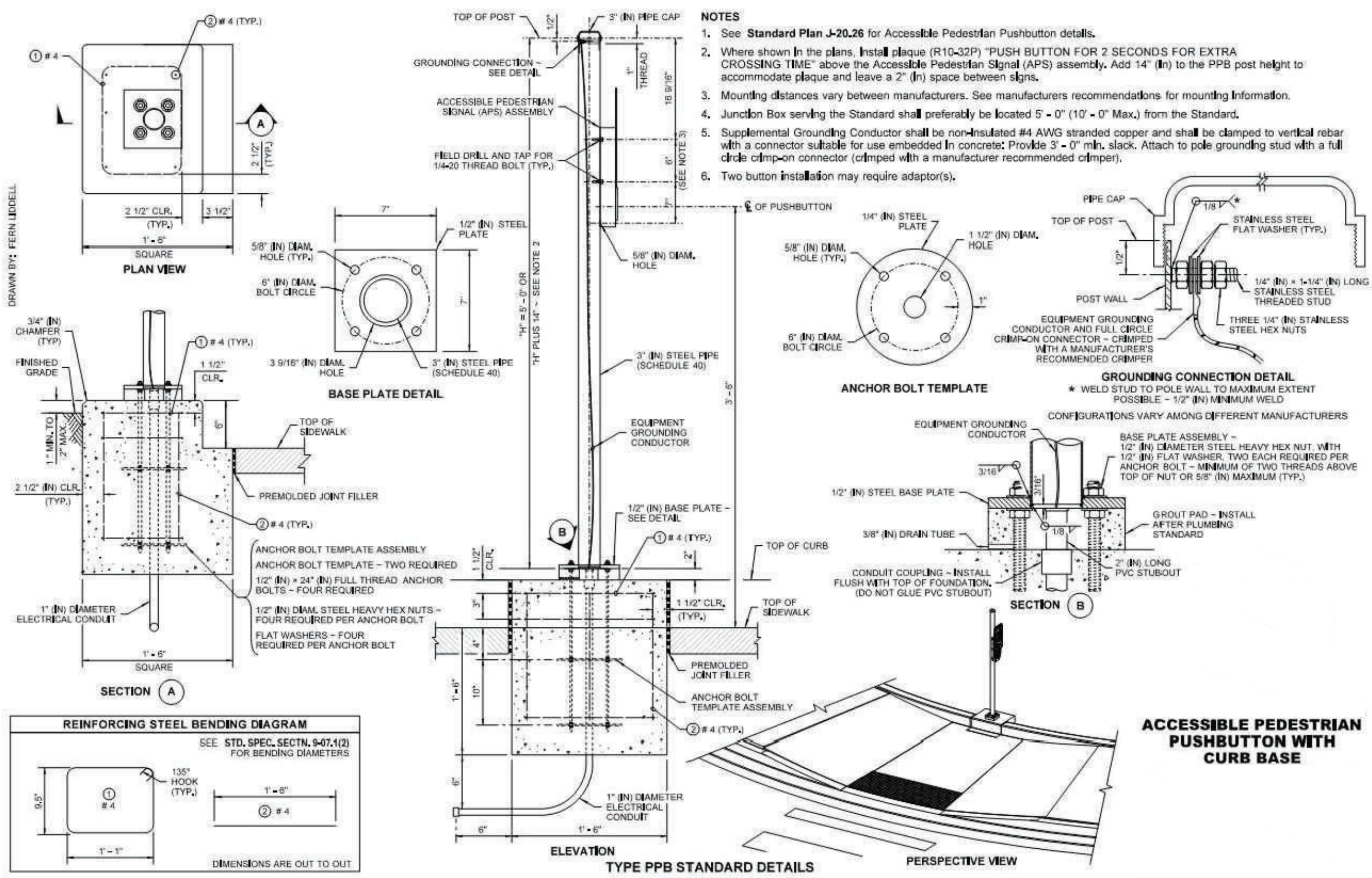
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SHEET 32 OF 50

FINAL PLANS



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TRAFFIC SIGNAL WSDOT DETAILS FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



Know what's below. Call before you dig.

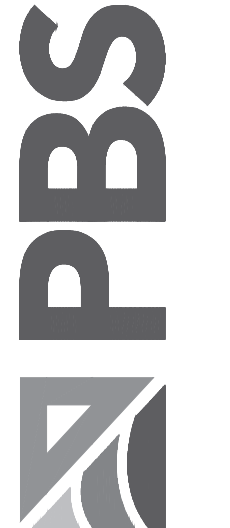
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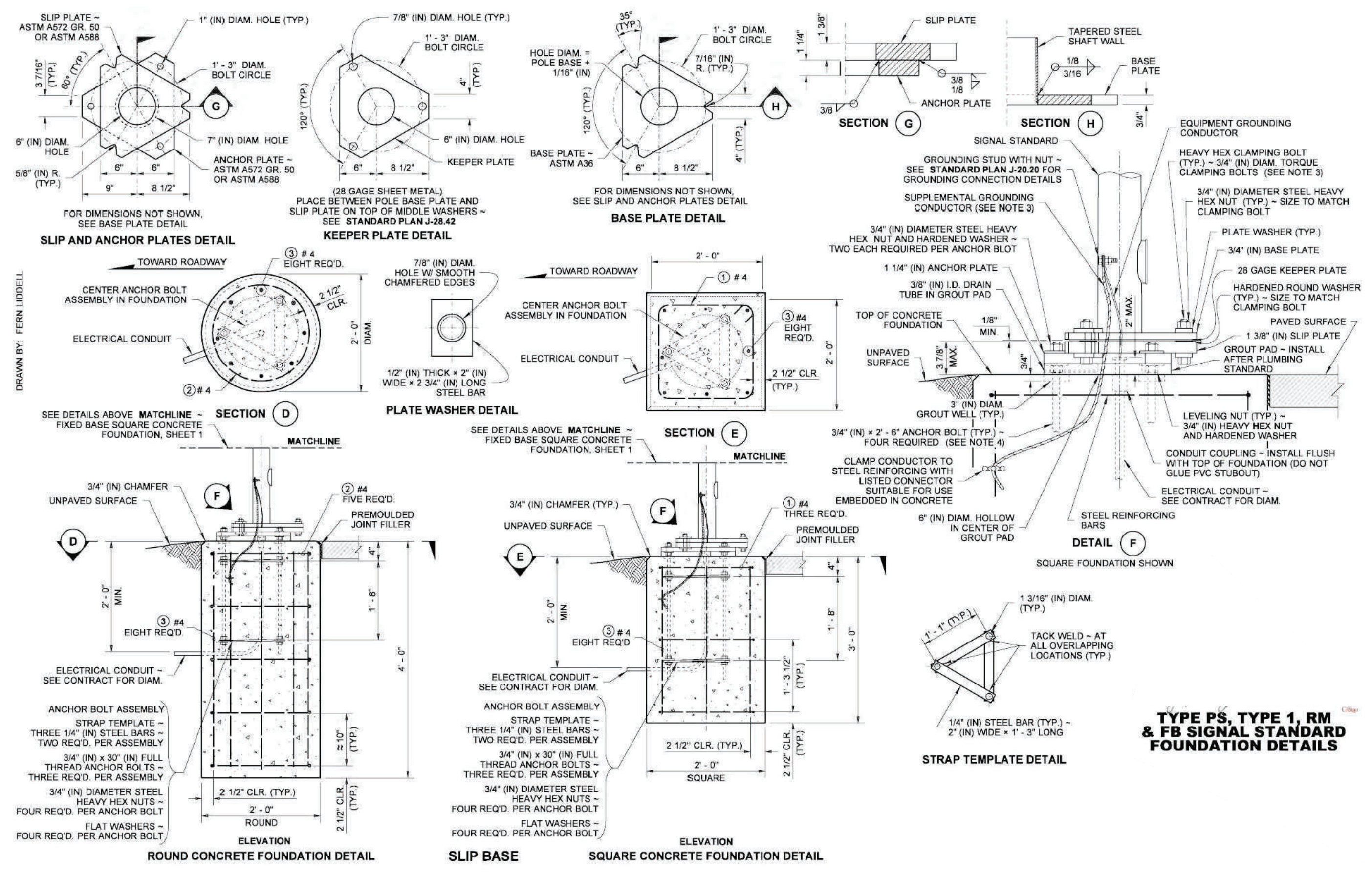
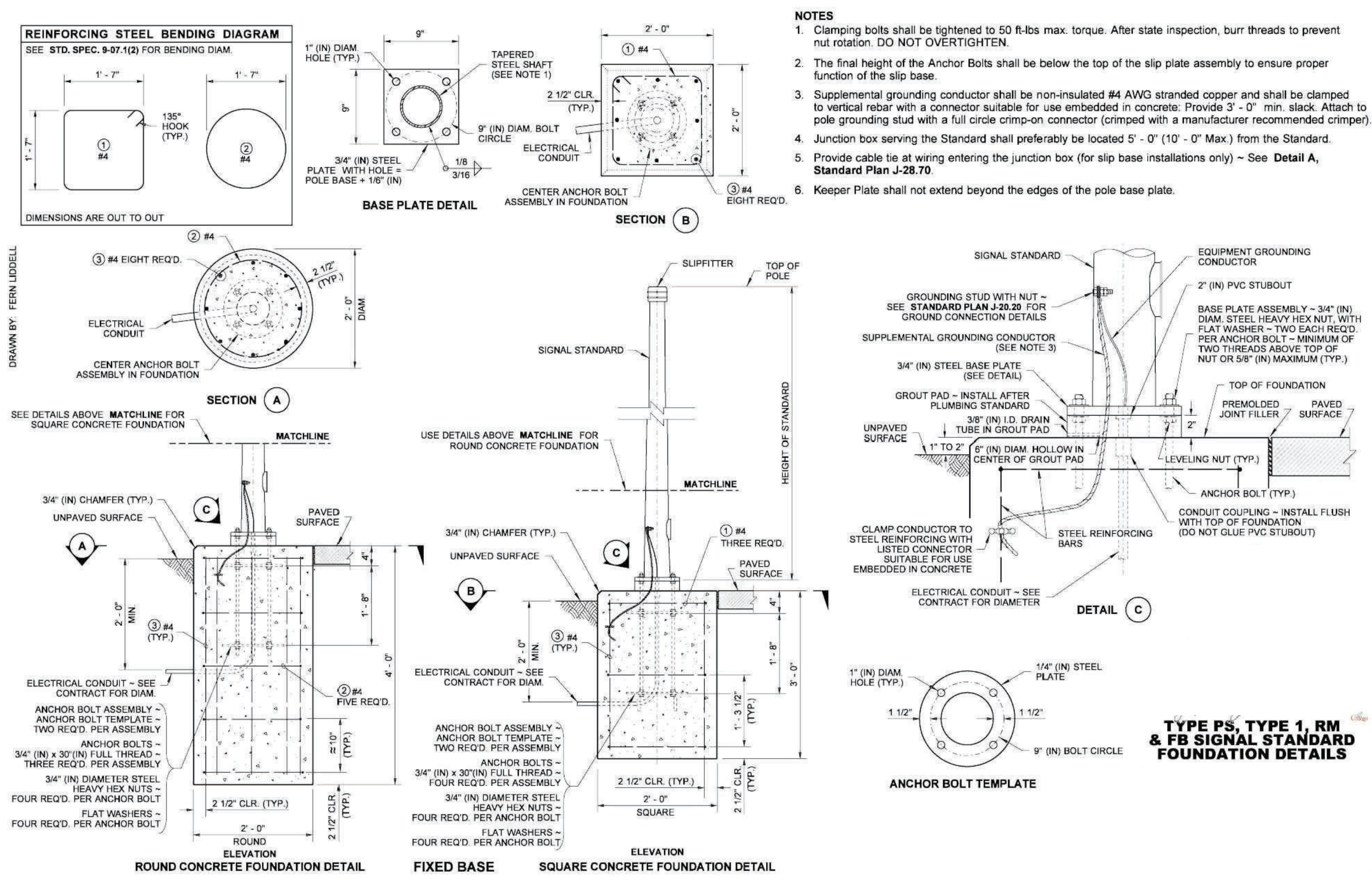
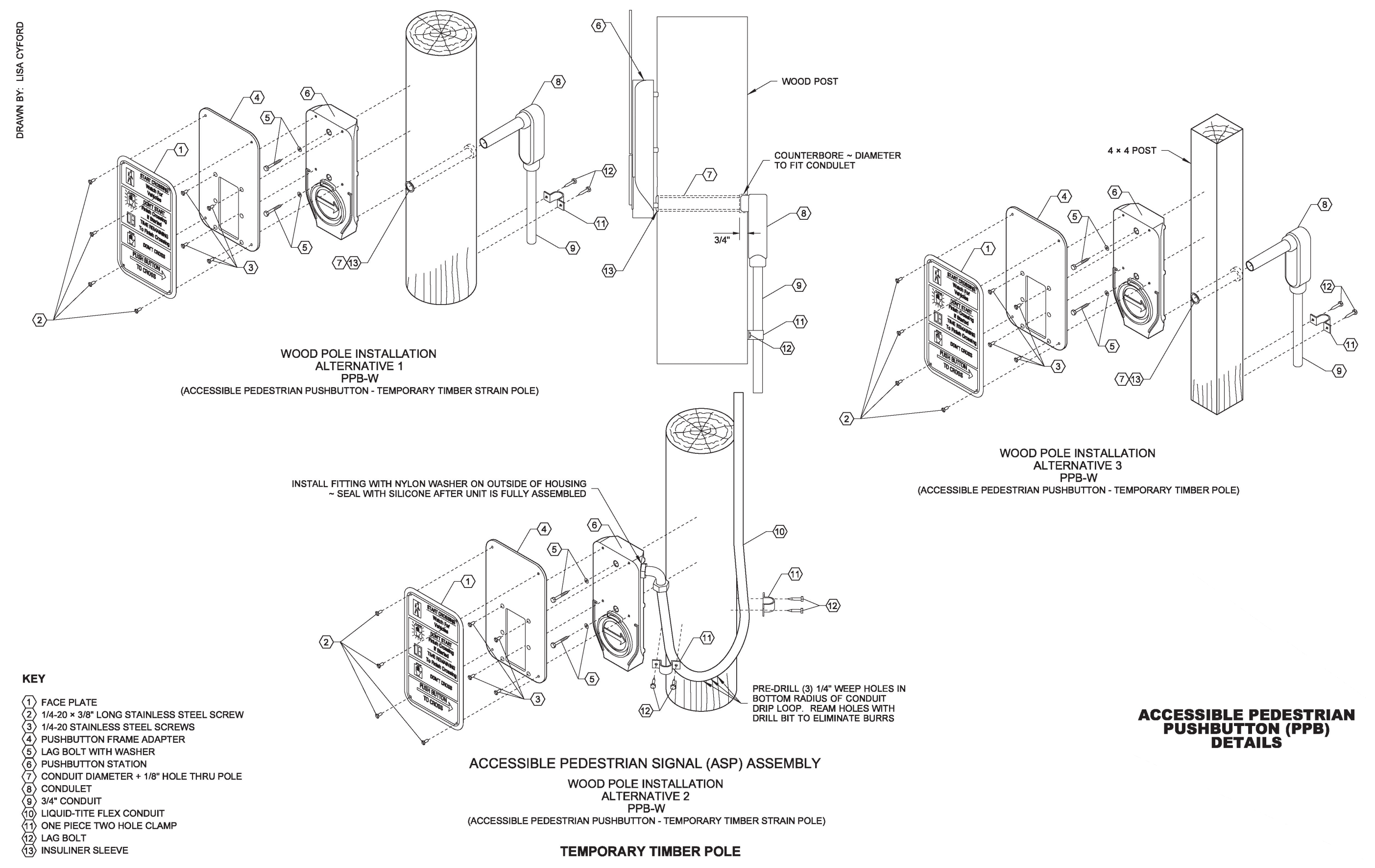
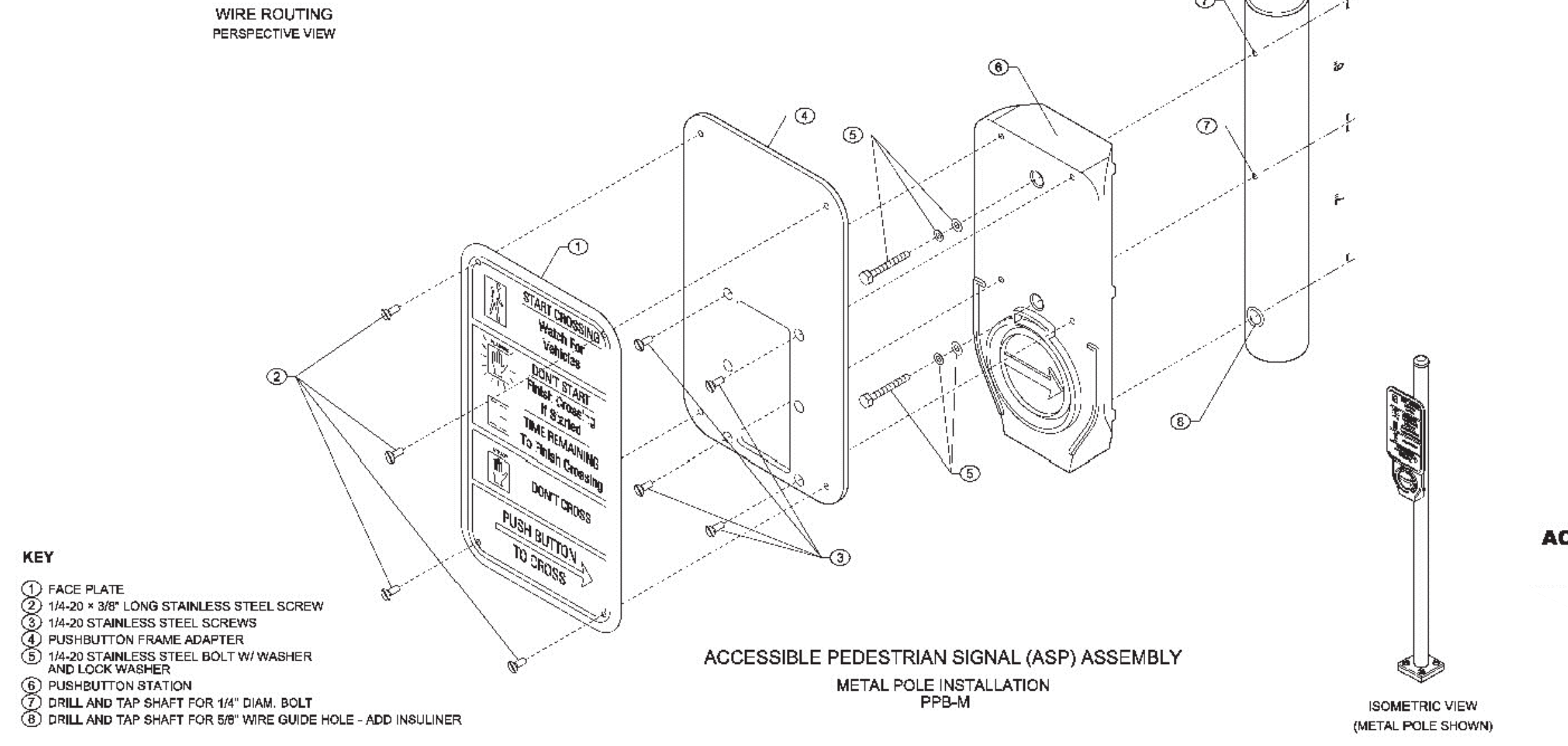
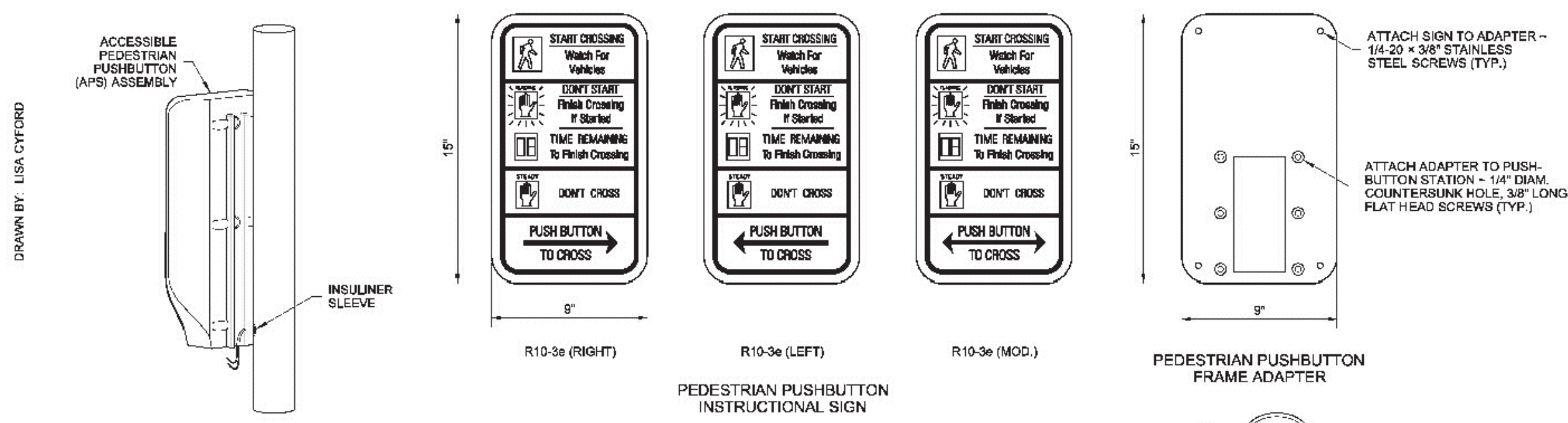
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FINAL PLANS

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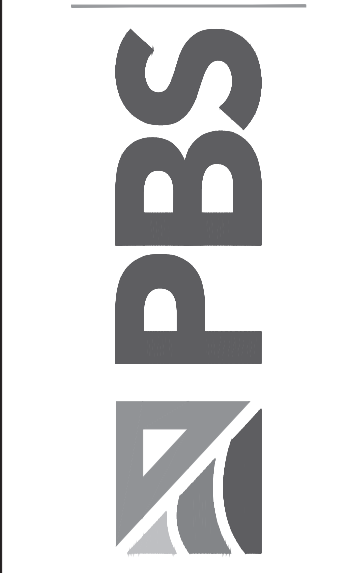


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TRAFFIC SIGNAL WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



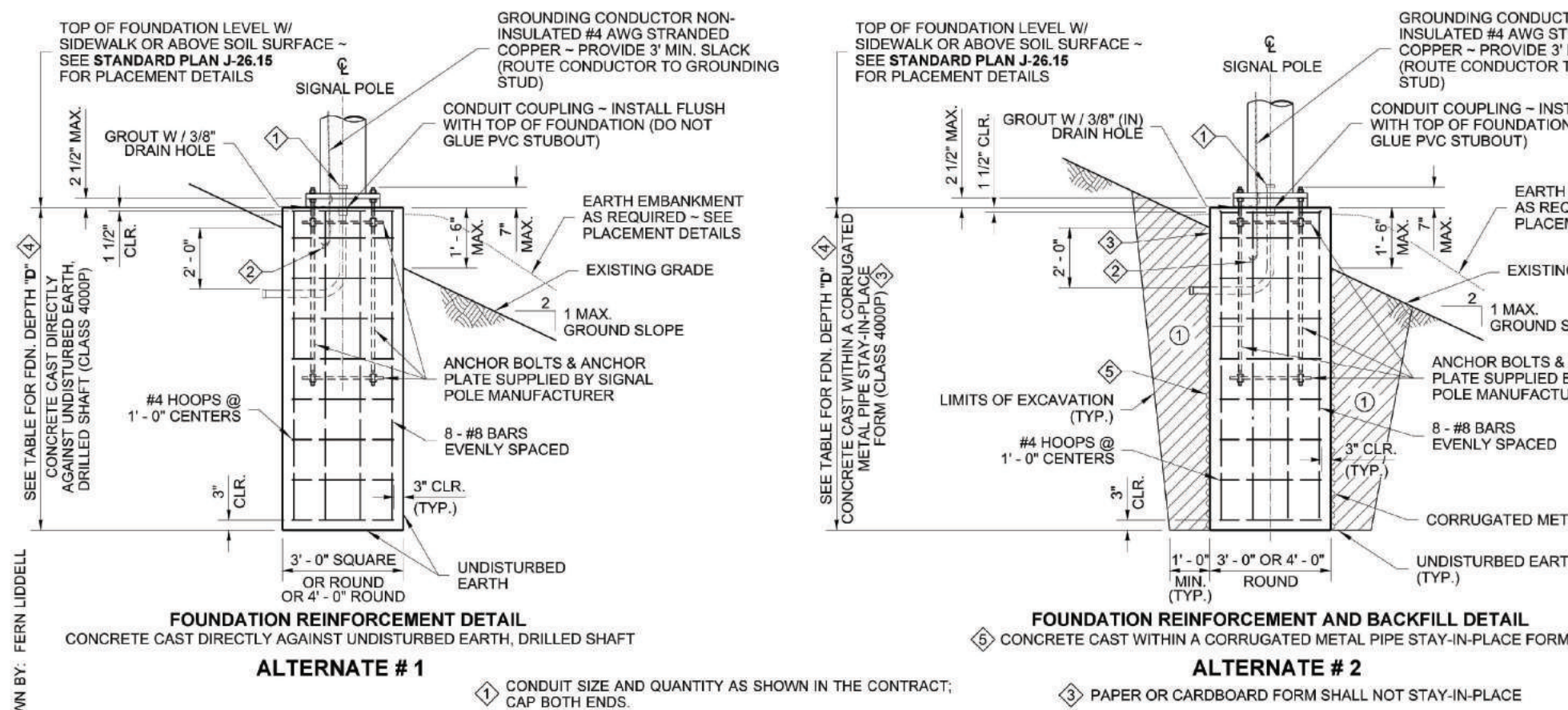
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SHEET **34** OF **50**

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NOTES

- This structure has been designed according to the Fifth Edition 2009 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. Basic wind velocity is 90 mph, Design Life/Recurrence Interval 50 years, and Fatigue Category III.
- Foundations are designed for Type II, III, and SD Signal Standards with a maximum arm length of 65'.
- Foundations are designed for Single Mast Arm Standards and Double Mast Arm Standards with 90° between arms. Special foundation design is required for Double Mast Arm Standards where the angle between mast arms is other than 90°. For Double Mast Arm Standards with 90° between arms, use larger XYZ value for foundation depth selection.
- Foundations not within the parameters of this standard require Special Design. Contact the **WSDOT Bridge and Structures Office** through the Engineer for Special Foundation Designs.
- Where a foundation is constructed within a Media Filter Drain, the foundation depth shown in the Contract Plans shall be increased by the depth of the Media Filter Drain.
- The top 2 feet of the foundation shall use a smooth form (such as paper or cardboard). After the concrete has cured, this entire form shall be removed.
- For design parameters between the values listed in Table, depth requirements may be interpolated between the values provided.
- Install Signal Foundation Identification Tag. See Standard Plan J-28.16 for details.

ALTERNATE #2 - CONSTRUCTION METHOD METAL (SUBSURFACE) FORM REQUIRED

When the existing soil will not retain a vertical face, over-excavate the foundation area and install a 36" or 48" diameter corrugated metal (pipe) form. The top of the corrugated metal form shall terminate 1 foot below final grade. Continue forming to full height using paper or cardboard form to achieve a smooth finish on final exposed cement concrete. Support the form as necessary to remain plumb.

Place the concrete foundation.

After concrete has cured, remove the entire paper or cardboard form portion.

Shoring or Extra Excavation as required. Excavated areas shall be backfilled with Controlled-Density Fill (CDF), or with soil in accordance with Standard Specification Section 8-20.3(2) and Composition Method 1 of Standard Specification Section 2-09.3(1).

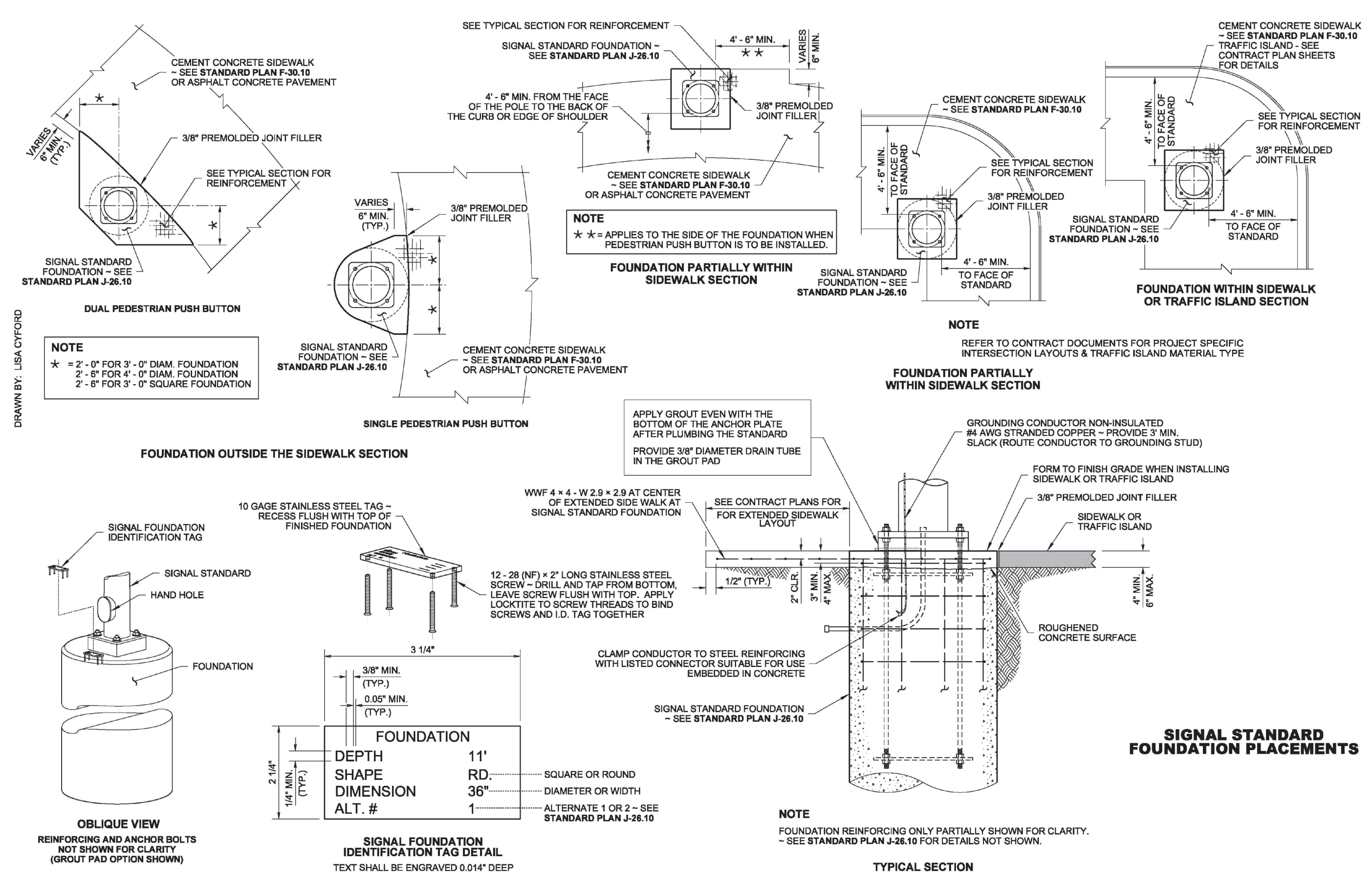
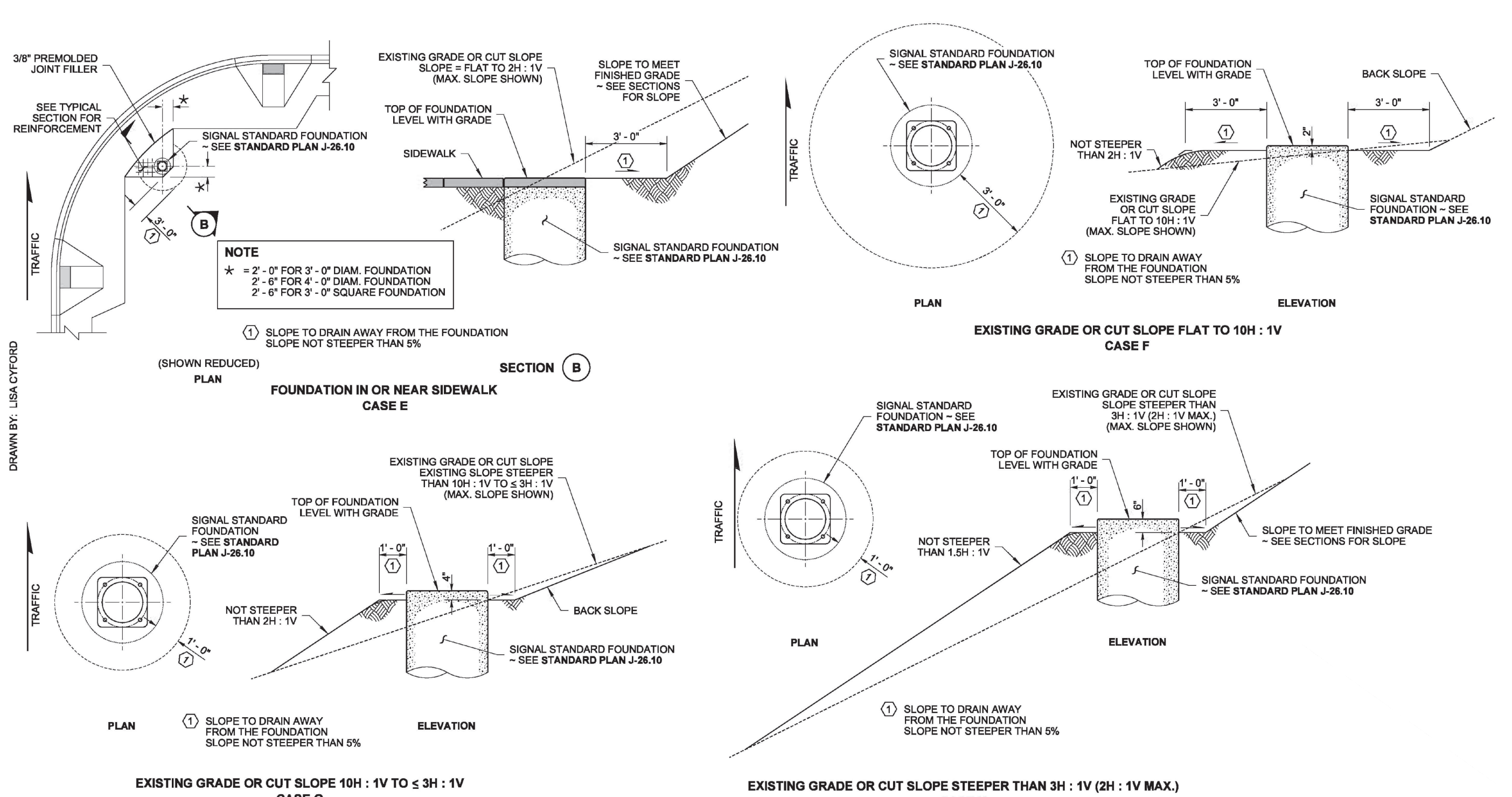
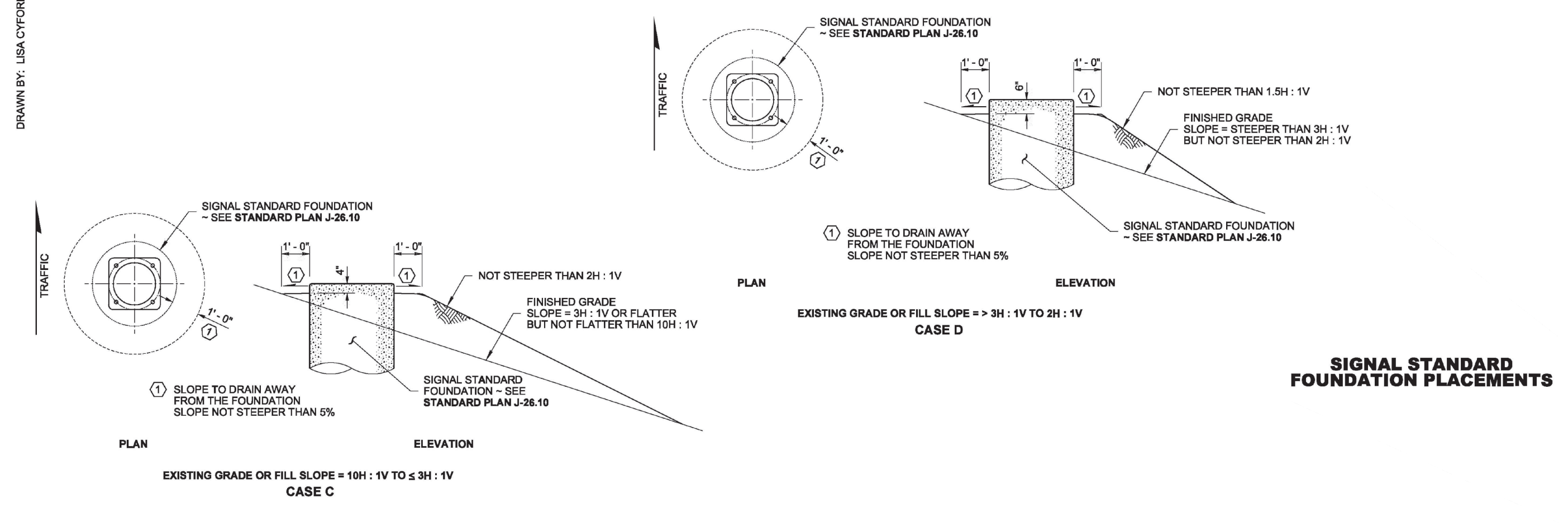
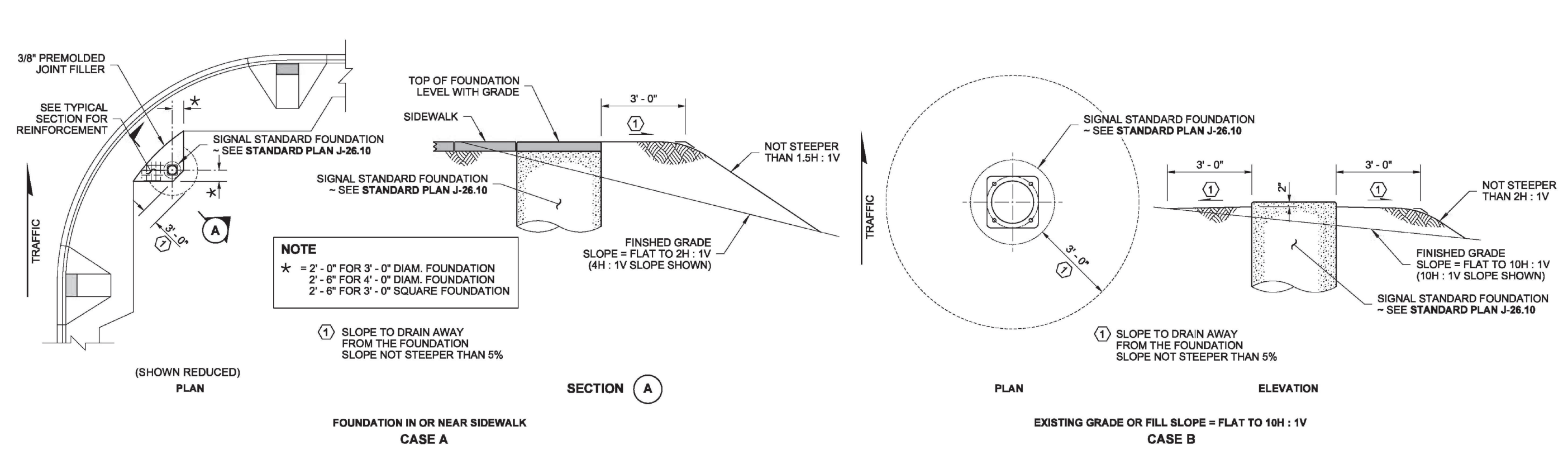
FOUNDATION DEPTH "D" TABLE

ALTERNATE #1 DRILLED SHAFT-TYPE CONSTRUCTION FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 34", 1500 PSF & Ø = 28", 1000 PSF & Ø = 26"

ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	GROUND SLOPE = 3H : 1V OR FLATTER						GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V						
		XYZ (FT)						XYZ (FT)						
1000 PSF	3'-0" ROUND	10'-0"	10'-0"	11'-0"	11'-0"	15'-0"	18'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"
	3'-0" SQUARE	8'-0"	8'-0"	9'-0"	9'-0"	10'-0"	11'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"
	4'-0" ROUND	8'-0"	8'-0"	9'-0"	9'-0"	10'-0"	11'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"	12'-0"
1500 PSF	3'-0" ROUND	8'-0"	8'-0"	9'-0"	11'-0"	13'-0"	15'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"	18'-0"
	3'-0" SQUARE	7'-0"	7'-0"	7'-0"	7'-0"	8'-0"	8'-0"	9'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
	4'-0" ROUND	7'-0"	7'-0"	7'-0"	7'-0"	8'-0"	8'-0"	9'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
2500 PSF OR GREATER	3'-0" ROUND	6'-0"	6'-0"	7'-0"	8'-0"	9'-0"	11'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
	3'-0" SQUARE	6'-0"	6'-0"	6'-0"	6'-0"	7'-0"	7'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
	4'-0" ROUND	6'-0"	6'-0"	6'-0"	6'-0"	7'-0"	7'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"

ALTERNATE #2 CORRUGATED METAL PIPE TYPE CONSTRUCTION FOR LATERAL BEARING PRESSURE = 2500 PSF & Ø = 23", 1500 PSF & Ø = 18", 1000 PSF & Ø = 17"

ALLOWABLE LATERAL BEARING PRESSURE	FOUNDATION TYPE	GROUND SLOPE = 3H : 1V OR FLATTER						GROUND SLOPE = GREATER THAN 3H : 1V TO 2H : 1V						
		XYZ (FT)						XYZ (FT)						
1000 PSF	3'-0" ROUND	10'-0"	10'-0"	11'-0"	15'-0"	20'-0"	25'-0"	28'-0"	28'-0"	28'-0"	28'-0"	28'-0"	28'-0"	28'-0"
	4'-0" ROUND	8'-0"	8'-0"	9'-0"	12'-0"	13'-0"	14'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
	3'-0" ROUND	8'-0"	8'-0"	11'-0"	15'-0"	18'-0"	21'-0"	25'-0"	25'-0"	25'-0"	25'-0"	25'-0"	25'-0"	25'-0"
1500 PSF	3'-0" ROUND	7'-0"	7'-0"	7'-0"	7'-0"	8'-0"	10'-0"	13'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
	4'-0" ROUND	7'-0"	7'-0"	7'-0"	7'-0"	8'-0"	10'-0"	13'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
	3'-0" ROUND	6'-0"	6'-0"	7'-0"	11'-0"	13'-0"	18'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"
2500 PSF OR GREATER	3'-0" ROUND	6'-0"	6'-0"	6'-0"	6'-0"	7'-0"	7'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
	4'-0" ROUND	6'-0"	6'-0"	6'-0"	6'-0"	7'-0"	7'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"
	3'-0" ROUND	6'-0"	6'-0"	6'-0"	6'-0"	7'-0"	7'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"	8'-0"



SIGNAL STANDARD FOUNDATION IDENTIFICATION TAG DETAIL

REINFORCING AND ANCHOR BOLTS NOT SHOWN FOR CLARITY (GROUT PAD OPTION SHOWN)

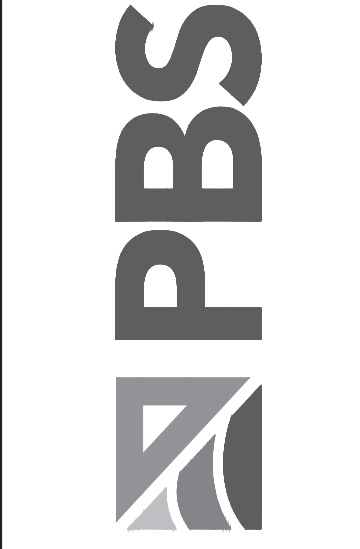
DEPTH	11'
SHAPE	RD.
DIMENSION	36"
ALT. #	1

NOTE: TEXT SHALL BE ENGRAVED 0.014" DEEP

SIGNAL STANDARD FOUNDATION PLACEMENTS

NOTE: FOUNDATION REINFORCING ONLY PARTIALLY SHOWN FOR CLARITY. - SEE STANDARD PLAN J-28.10 FOR DETAILS NOT SHOWN.

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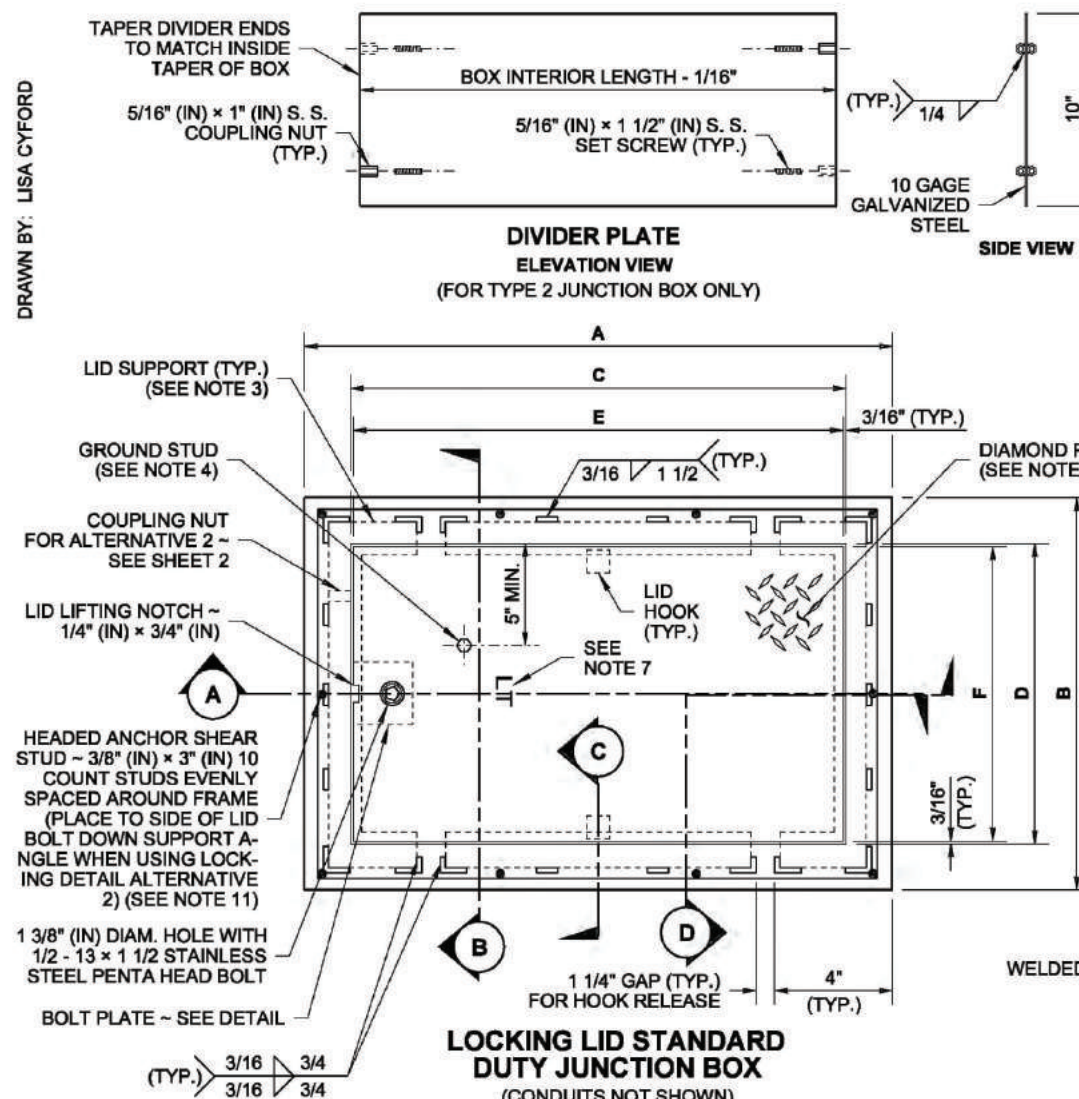
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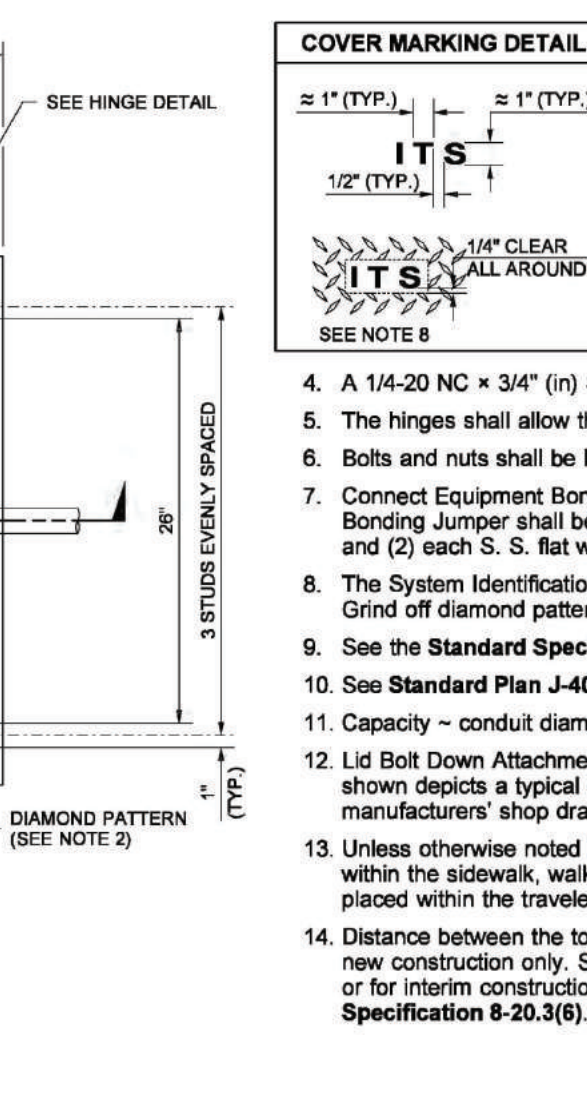
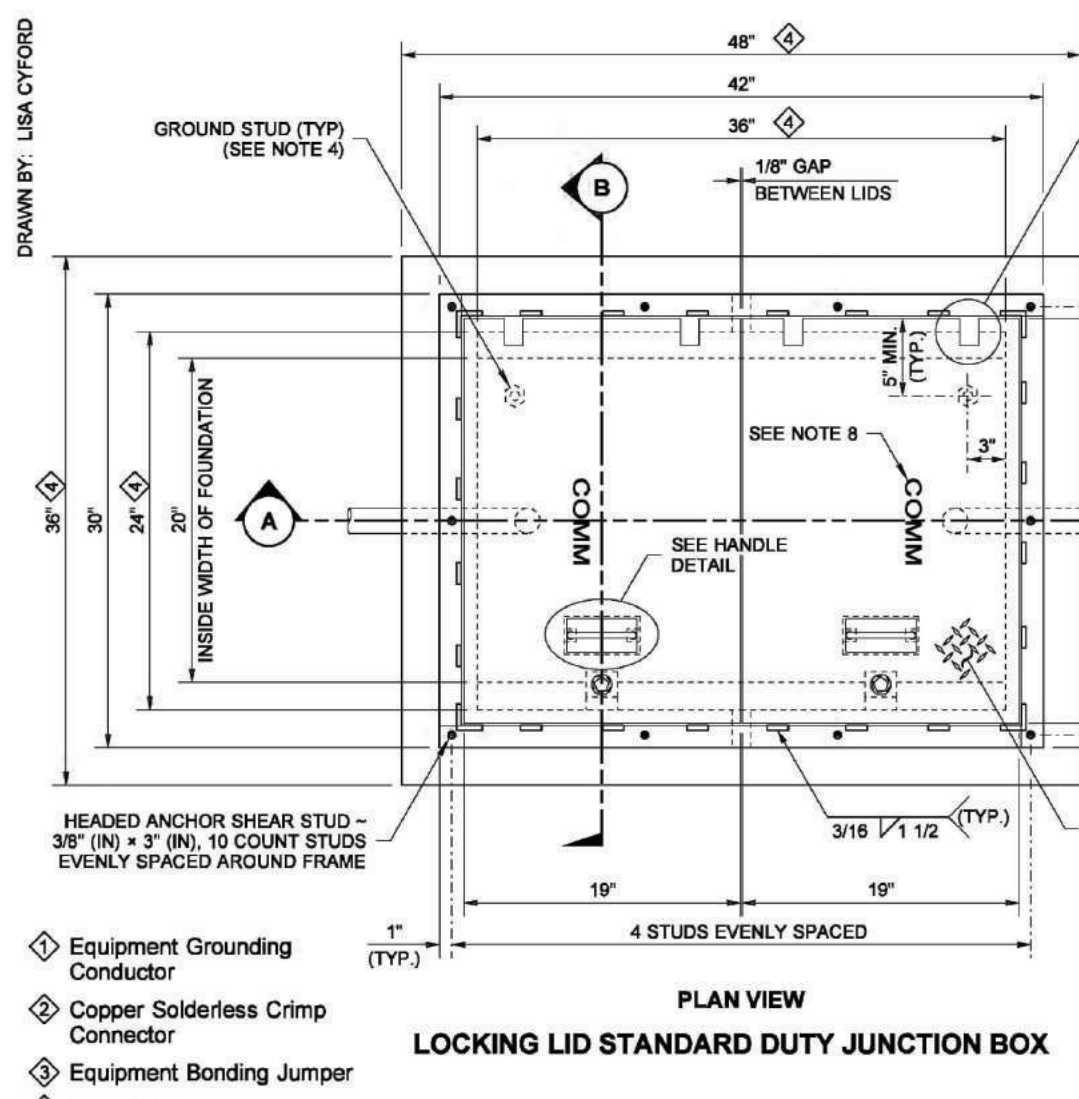
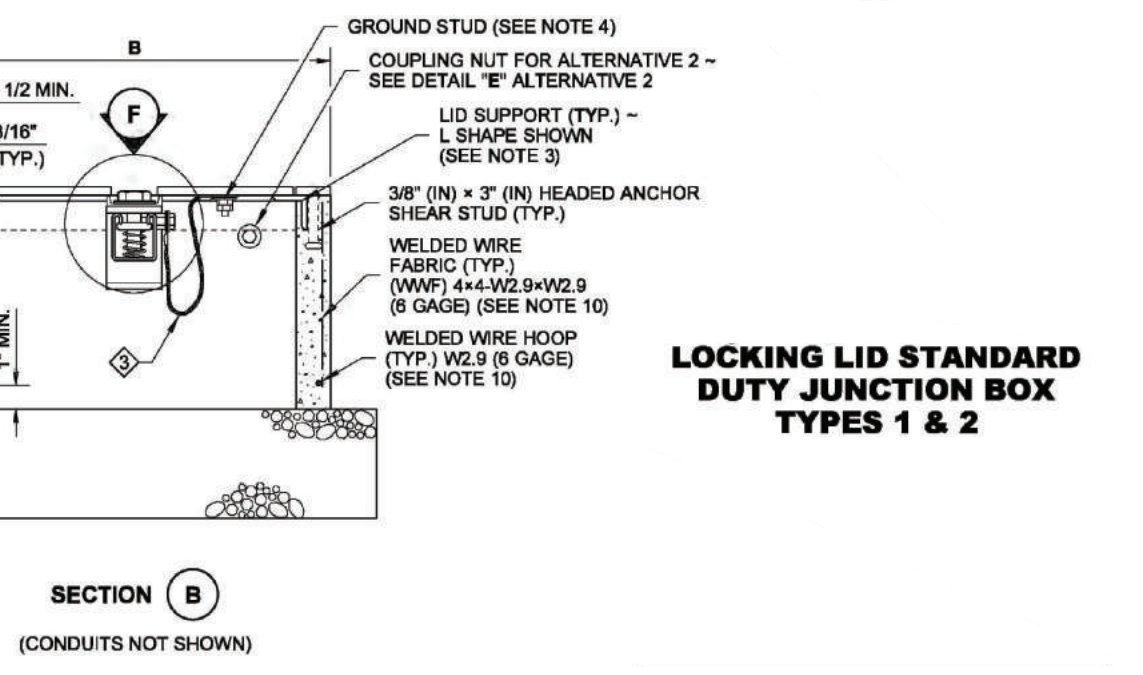
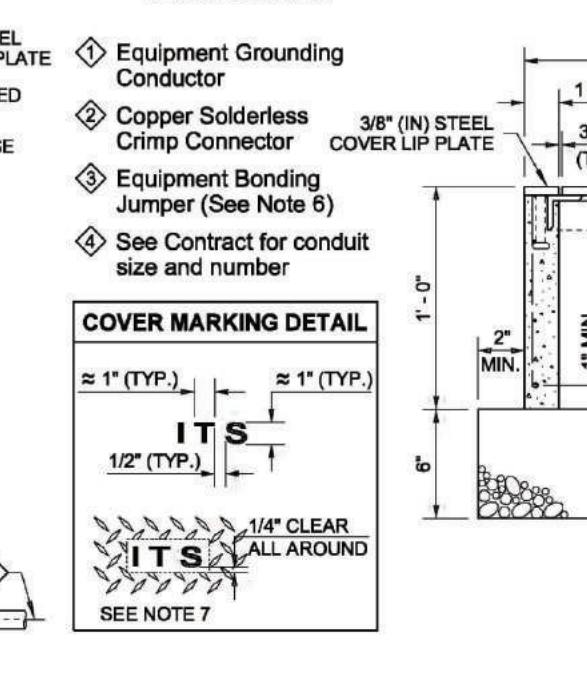
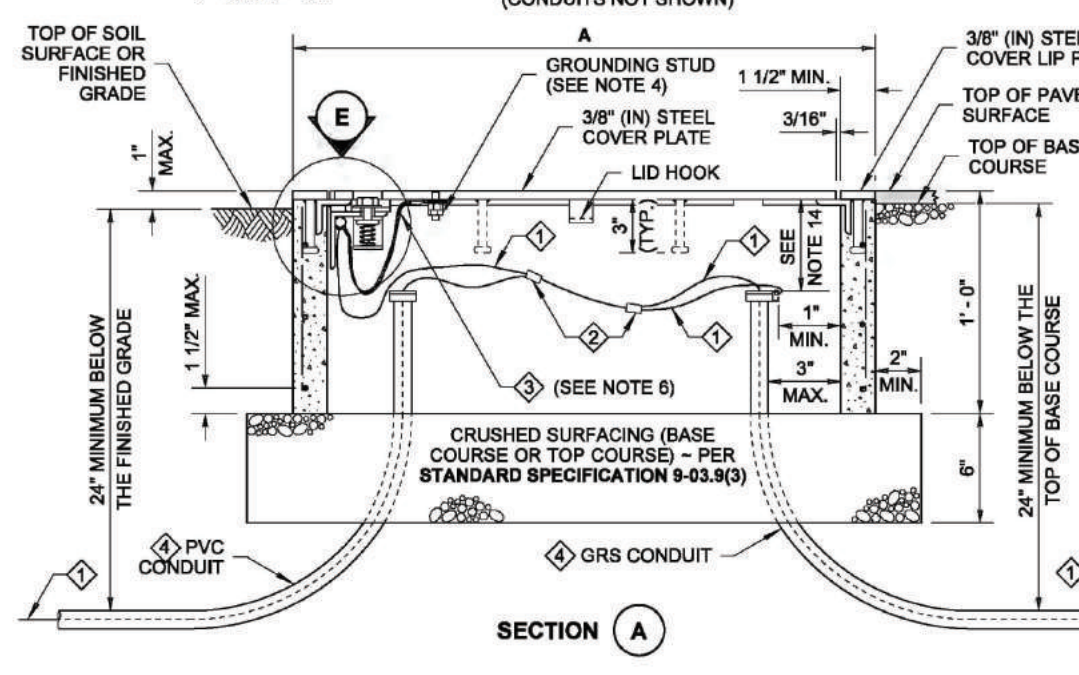
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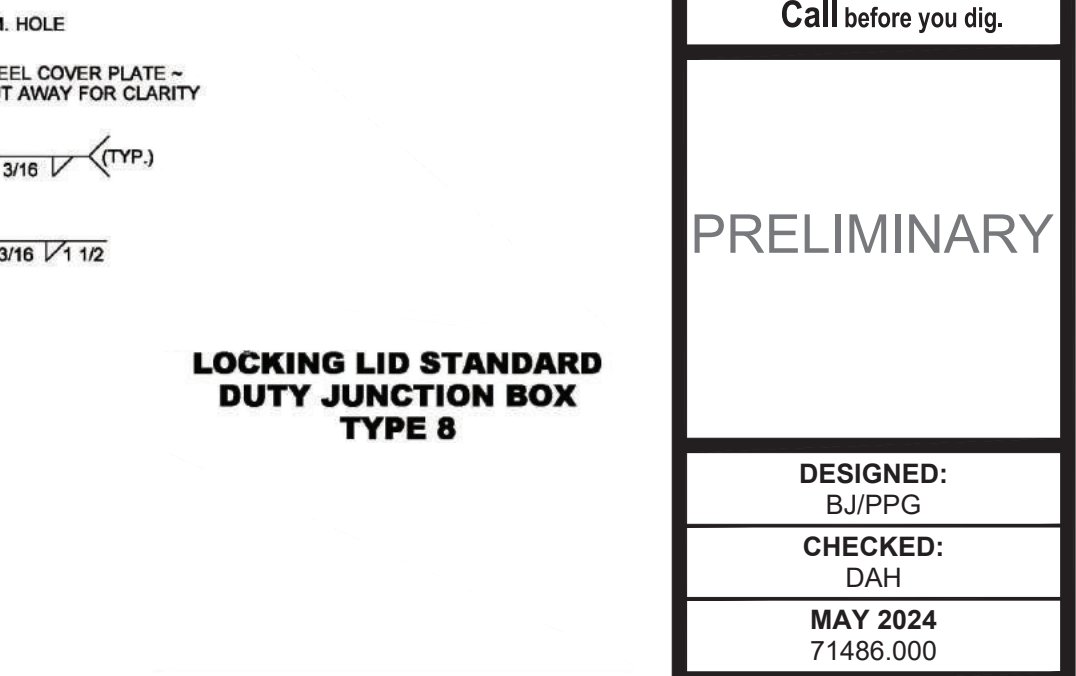
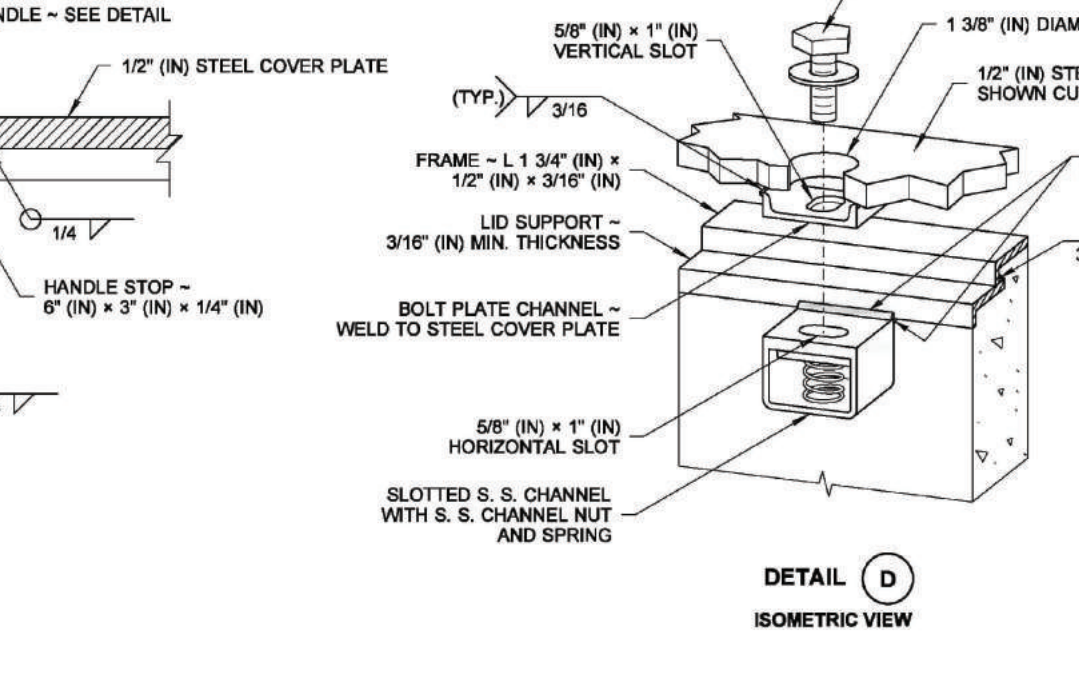
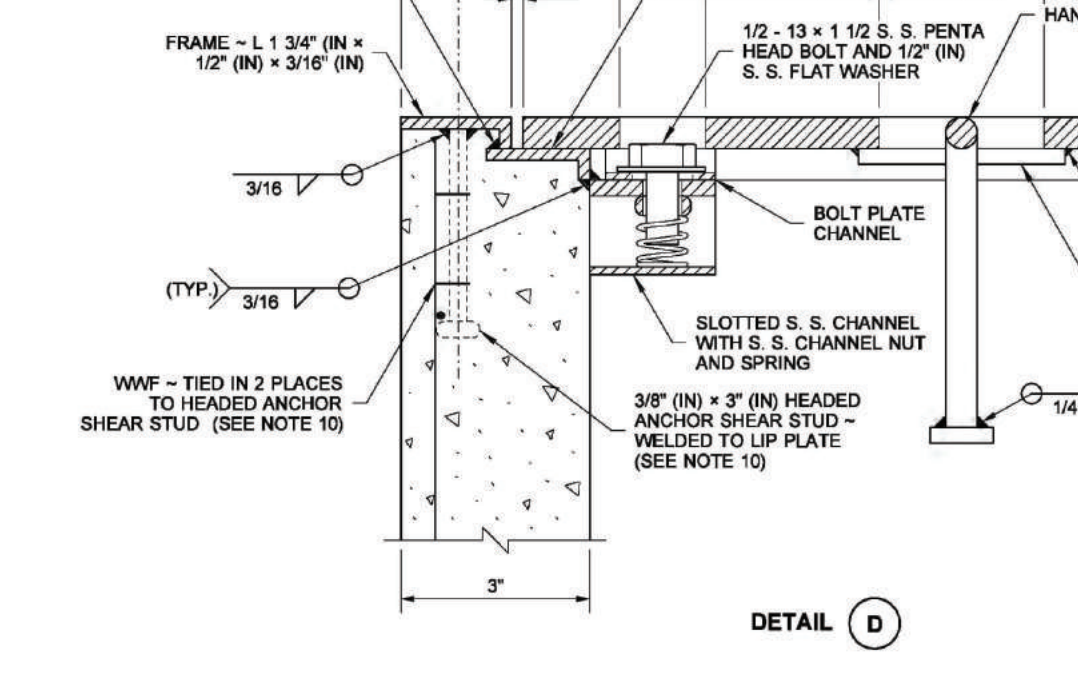
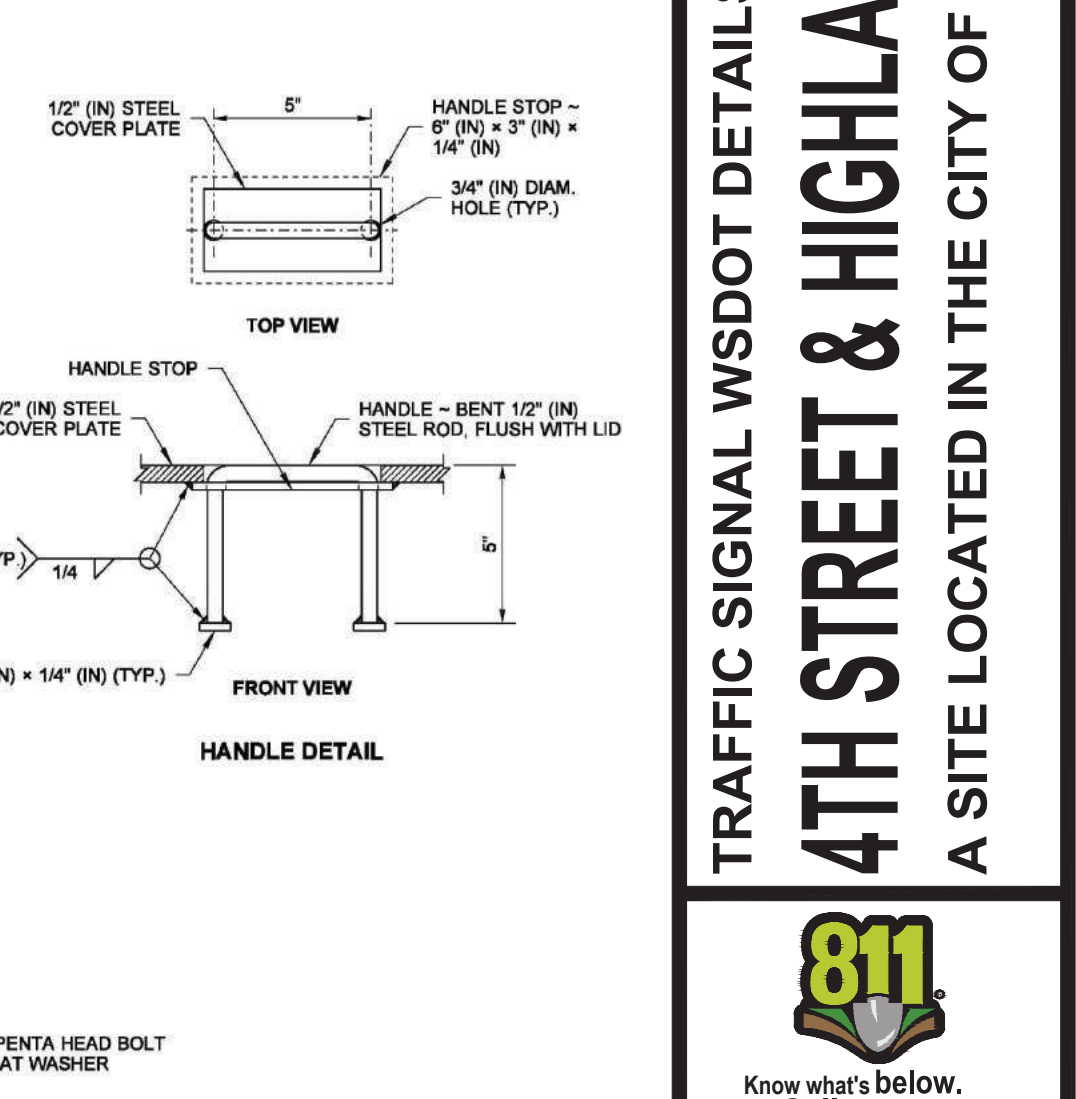
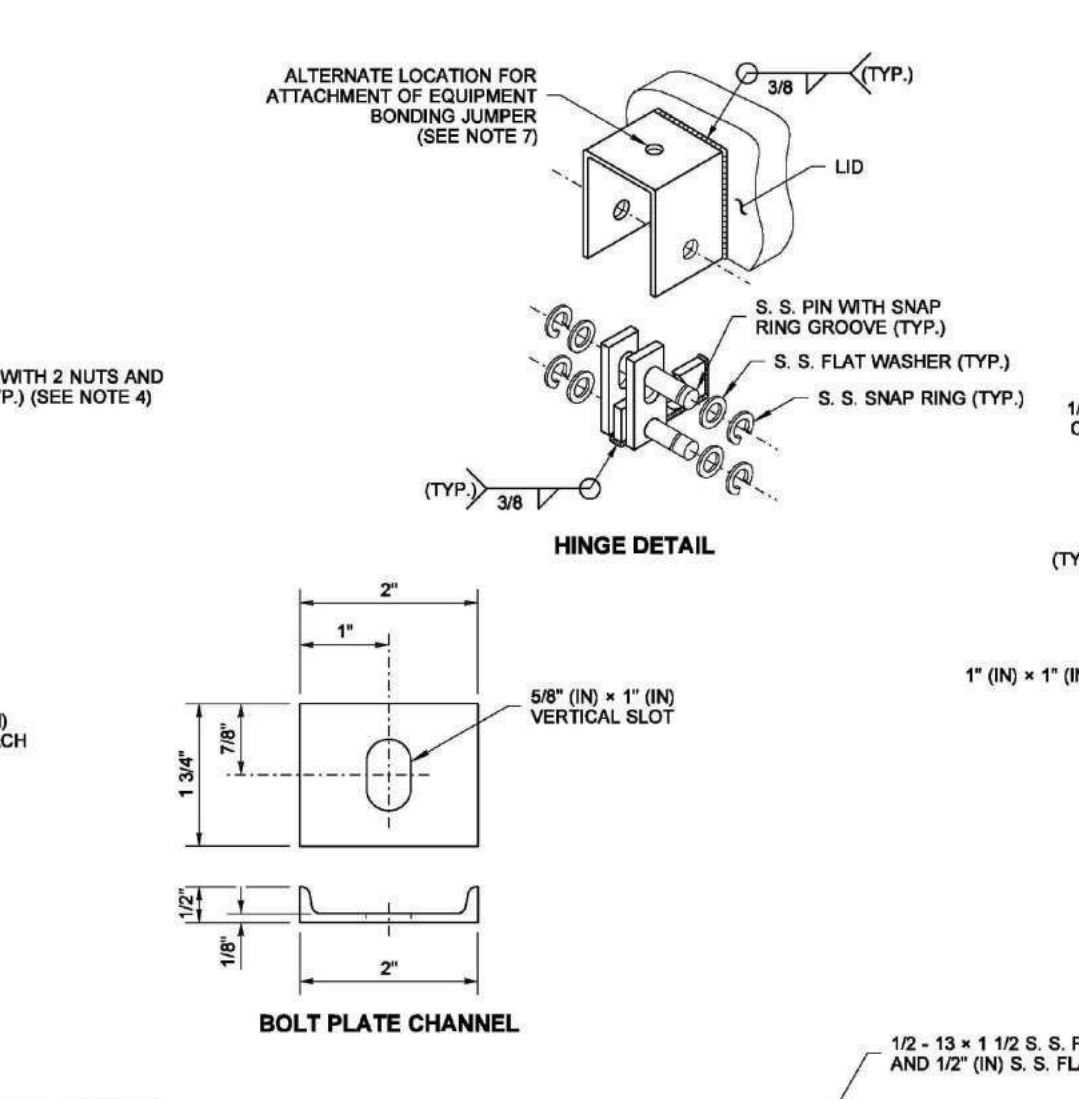
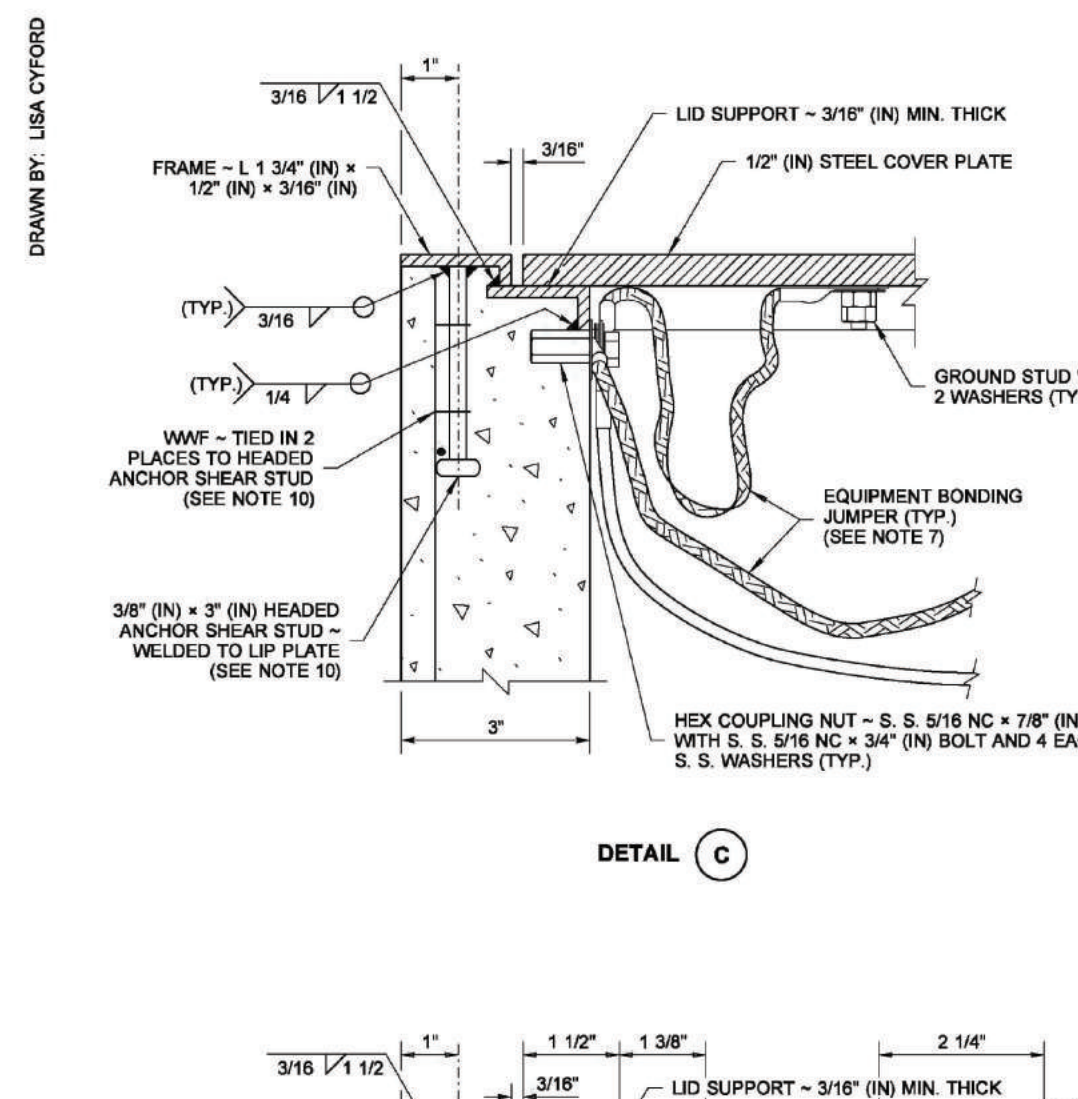
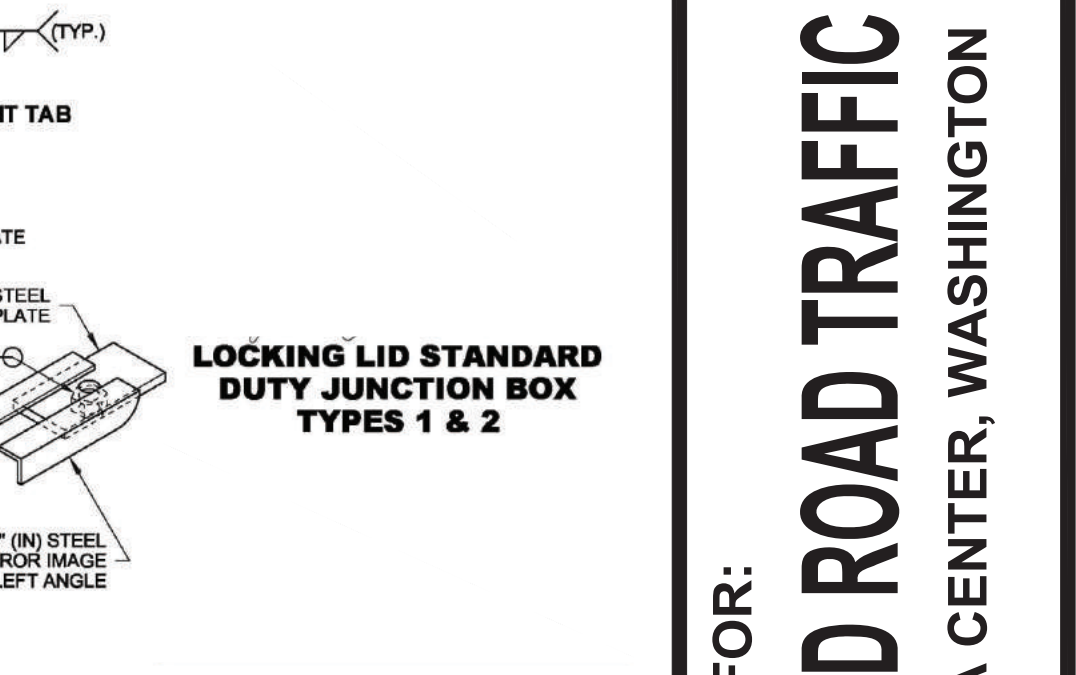
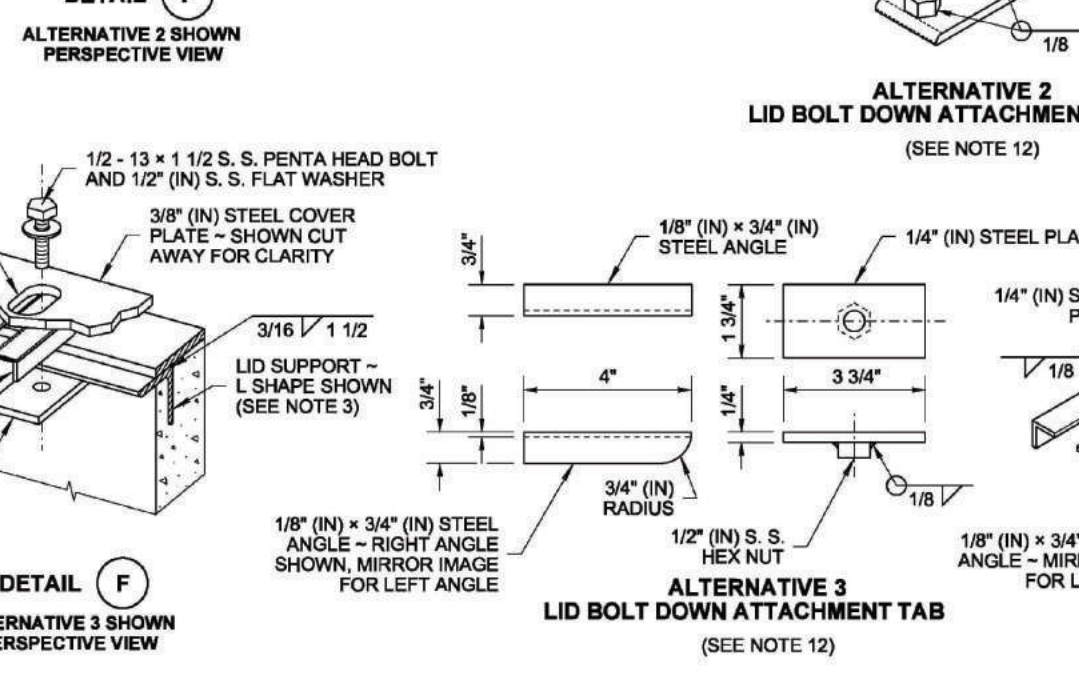
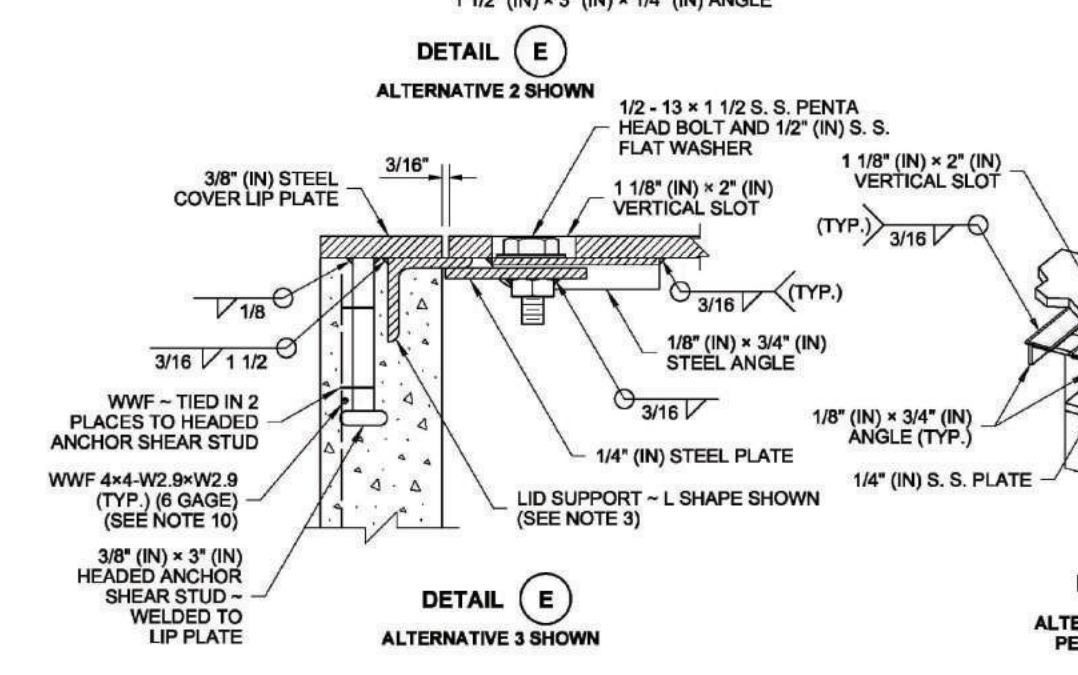
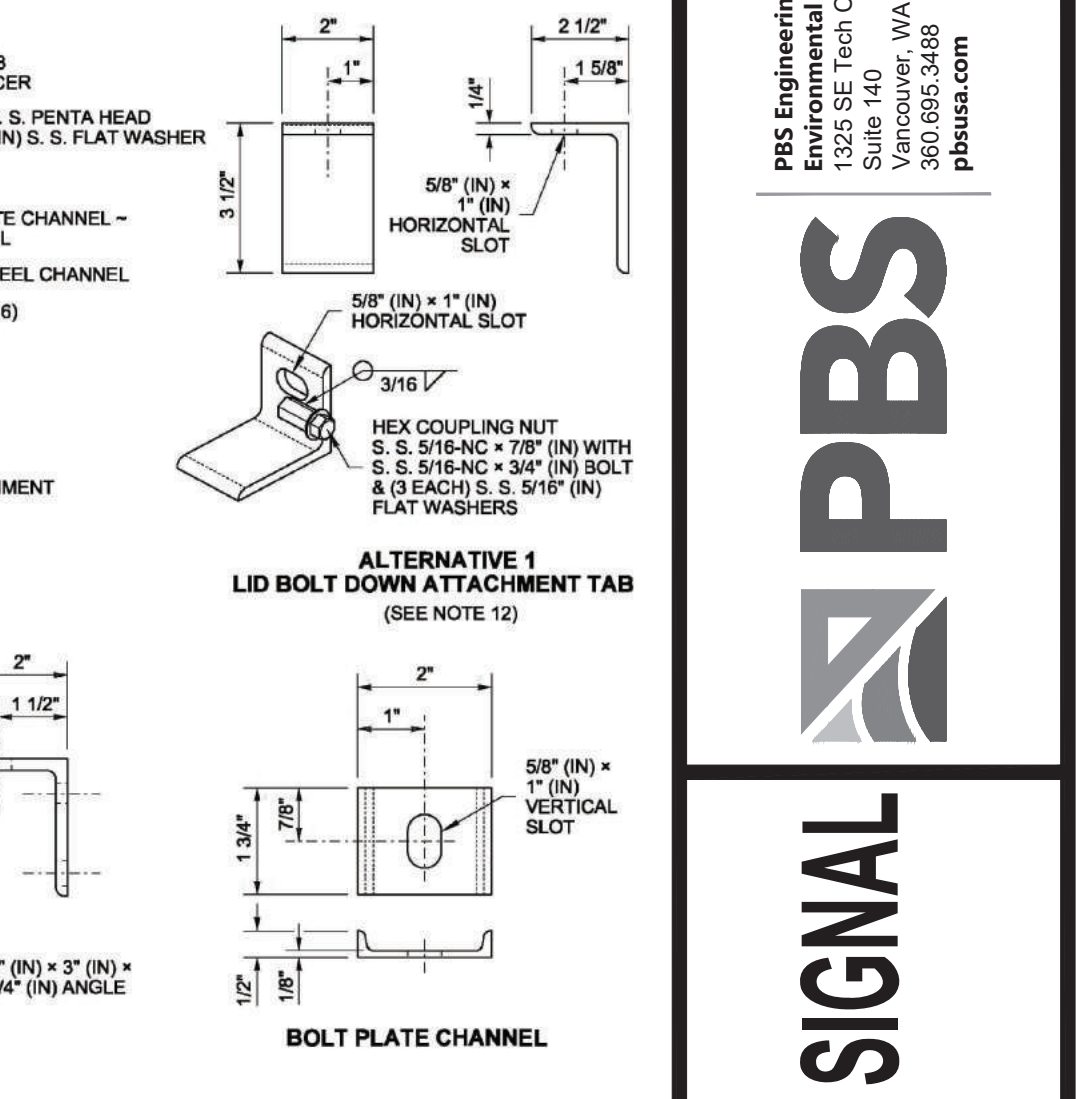
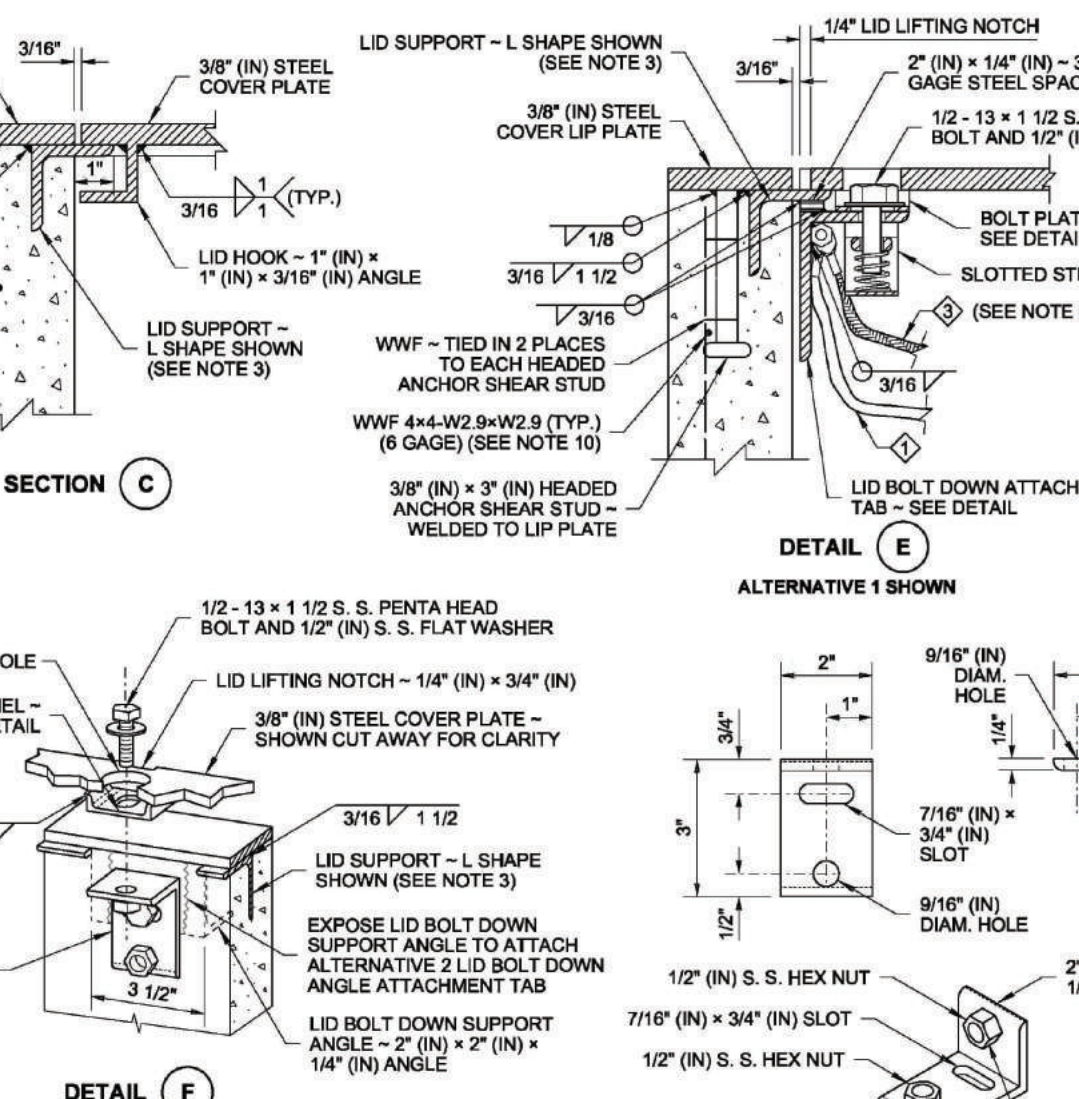
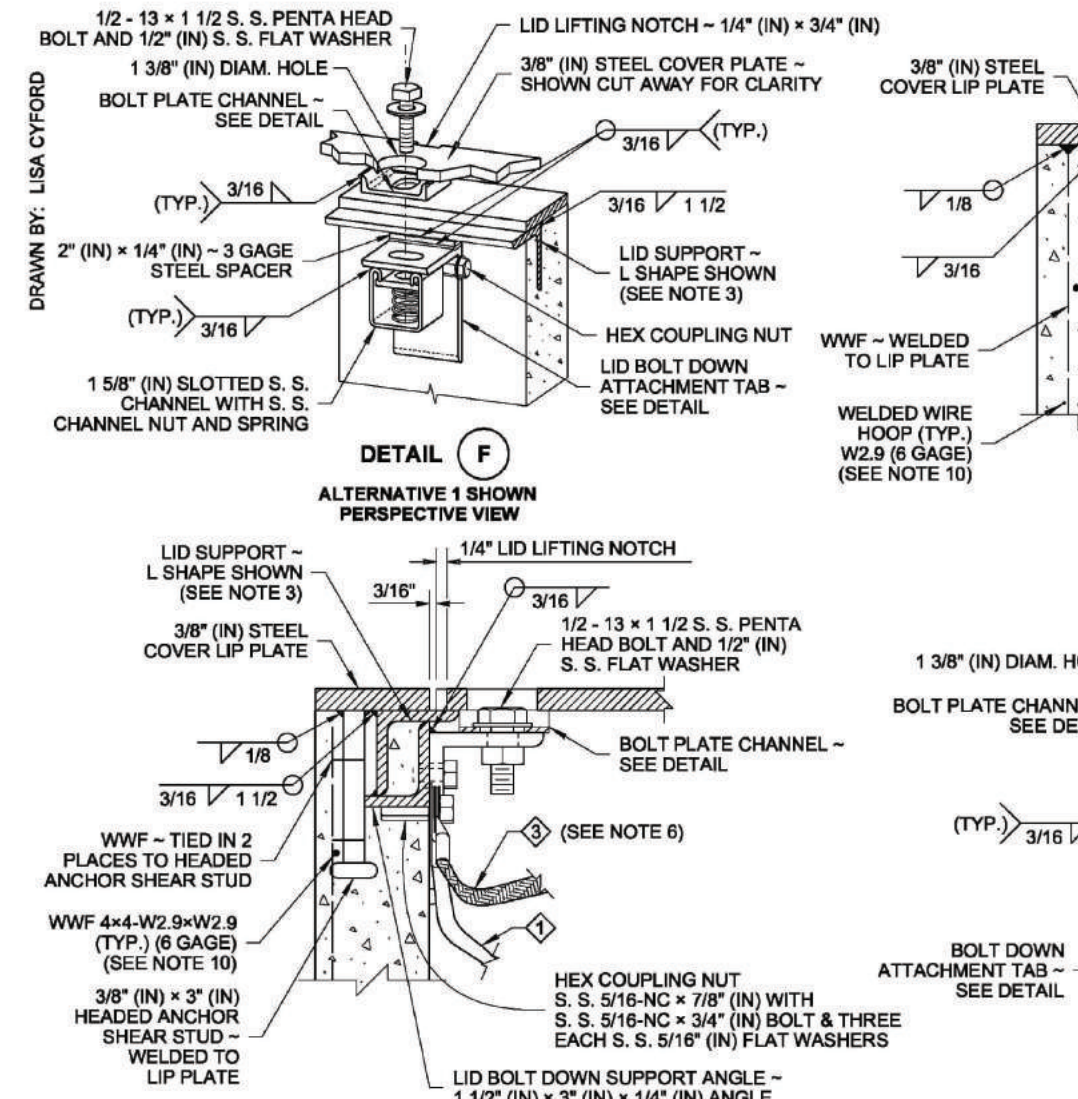
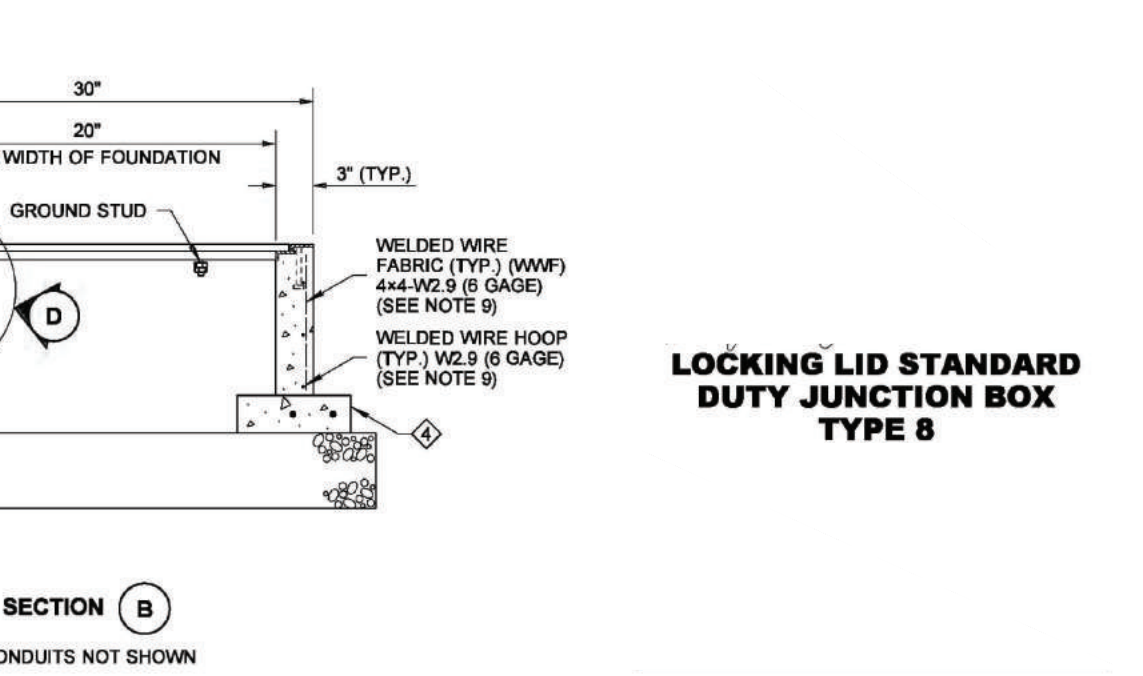
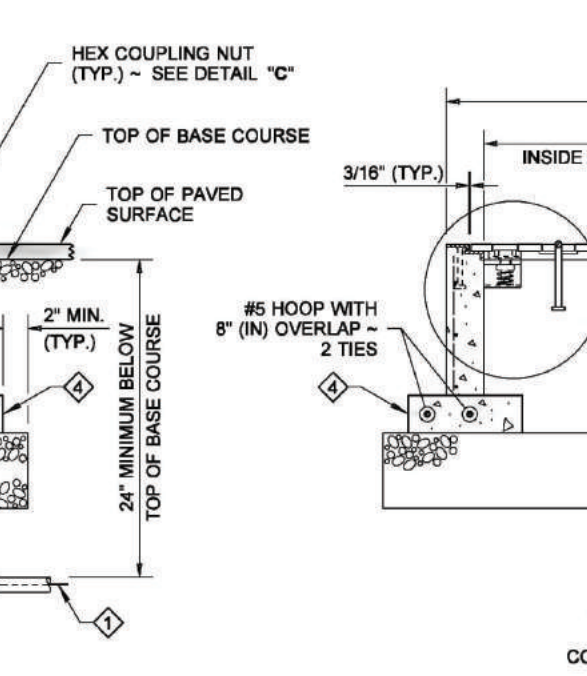
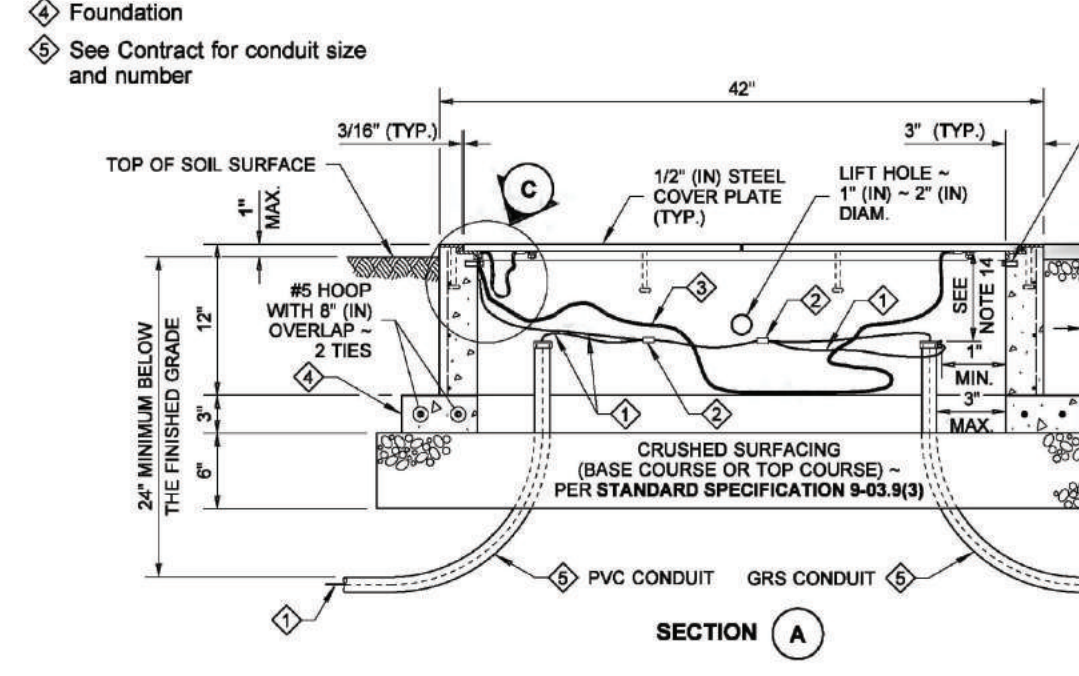


MARK	ITEM	BOX TYPE	
		TYPE 1	TYPE 2
A	OUTSIDE LENGTH OF JUNCTION BOX	22"	33"
B	OUTSIDE WIDTH OF JUNCTION BOX	17"	22 1/2"
C	INSIDE LENGTH OF JUNCTION BOX	18" - 19"	28" - 29"
D	INSIDE WIDTH OF JUNCTION BOX	13" - 14"	17" - 18"
E	LID LENGTH	17 5/8"	28 5/8"
F	LID WIDTH	12 5/8"	18 1/8"
	CAPACITY - CONDUIT DIAMETER	6"	12"


- NOTES**
- All box dimensions are approximate. Exact configurations vary among manufacturers.
 - Minimum lid thickness shown. Junction Boxes installed in sidewalks, walkways, and shared-use paths shall have a slip-resistant coating on the lid and lip cover plate, and shall be installed with the surface flush with and matched to the grade of the sidewalk, walkway, or shared-use path. The non-slip lid shall be identified with permanent markings on the underside, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The permanent marking shall be 1/8" (in) line thickness formed with a mild steel weld bead and shall be placed prior to hot-dip galvanizing.
 - Lid support members shall be 3/16" (in) minimum thick steel C, L, or T shape, welded to the frame.
 - A 1/4-20 NC x 3/4" (in) stainless steel ground stud shall be welded to the bottom of the lid; include (2) stainless steel nuts and (2) stainless steel flat washers.
 - Bolts and nuts shall be liberally coated with anti-seize compound.
 - Equipment Bonding Jumper shall be # 8 AWG min. x 4' (ft) of tinned braided copper.
 - The System Identification letters shall be 1/8" (in) line thickness formed with a mild steel weld bead. See Cover Marking detail. Grind off diamond pattern before forming letters. For System Identification details, see **Standard Specification 9-29.2(4)**.
 - When required in the Contract, provide a 10" (in) x 27 1/2" (in), 10 gage divider plate, complete, with fasteners, in each Type 2 Junction Box where specified.
 - When required in Contract, provide a 12" (in) deep extension for each Type 2 Junction Box where specified.
 - See the **Standard Specifications** for alternative reinforcement and class of concrete.
 - Headed Anchor Shear Studs must be welded to the Steel Cover Lip Plate and wire tied in two places to the vertical Welded Wire Fabric when in contact with each other. Wire tie all other Headed Anchor Shear Studs to the horizontal Welded Wire Fabric.
 - Lid Bolt Down Attachment Tab provides a method of retrofitting by using a mechanical process in lieu of welding. Attachment Tab shown depicts a typical component arrangement; actual configurations of assembly will vary among manufacturers. See approved manufacturers' shop drawings for specifics.
 - Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults, and Pull Boxes shall not be placed in sidewalks, walkways, shared use paths, traveled ways or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty.
 - Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 8" (in) max. for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" (in) min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.



- NOTES**
- All box dimensions are approximate. Exact configurations vary among manufacturers.
 - Minimum lid thicknesses are shown. Junction Boxes installed in sidewalks, walkways, and shared-use paths shall have a slip-resistant coating on the lid and lip cover plate and shall be installed with the surface flush with and matched to the grade of the sidewalk, walkway, or shared-use path. The non-slip lid shall be identified with permanent markings on the underside, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The permanent marking shall be 1/8" (in) line thickness formed with a mild steel weld bead and shall be placed prior to hot-dip galvanizing.
 - Lid support members shall be 3/16" (in) min. thick steel C, L, or T shape, welded to the frame. Exact configurations vary among manufacturers.
 - A 1/4-20 NC x 3/4" (in) S. S. ground stud shall be welded to the bottom of each lid; include (2) S. S. nuts and (2) S. S. flat washers.
 - The hinges shall allow the lids to open 180°.
 - Bolts and nuts shall be liberally coated with anti-seize compound.
 - Connect Equipment Bonding Jumper to ground stud on lid. As an alternative to the ground stud connection, the Equipment Bonding Jumper shall be attached to the front face of the hinge pocket with a 5/16-20 NC x 3/4" (in) S. S. bolt, (2) each S. S. nuts, and (2) each S. S. flat washers. Equipment Bonding Jumper shall be # 8 AWG min. x 4' (ft) of tinned braided copper.
 - The System Identification letters shall be 1/8" (in) line thickness formed by a mild steel weld bead. See Cover Marking detail. Grind off diamond pattern before forming letters. See **Standard Specification 9-29.2(4)** for details.
 - See the **Standard Specifications** for alternative reinforcement and class of concrete.
 - Capacity - conduit diameter = 24" (in)
 - Lid Bolt Down Attachment Tab provides a method of retrofitting by using a mechanical process in lieu of welding. Attachment Tab shown depicts a typical component arrangement; actual configurations of assembly will vary among manufacturers. See approved manufacturers' shop drawing for specifics.
 - Unless otherwise noted in the plans or approved by the Engineer, Junction Boxes, Cable Vaults and Pull Boxes shall not be placed within the sidewalk, walkway, shared use path, traveled way or paved shoulders. All Junction Boxes, Cable Vaults, and Pull Boxes placed within the traveled way or paved shoulders shall be Heavy-Duty.
 - Distance between the top of the conduit and the bottom of the Junction Box lid shall be 6" (in) min. to 6" (in) max. for final grade of new construction only. See **Standard Specification 8-20.3(5)**. Where adjustments are to be made to existing Junction Boxes, or for interim construction stages during the contract, the limits shall be from 6" (in) min. to 10" (in) max. See **Standard Specification 8-20.3(6)**.



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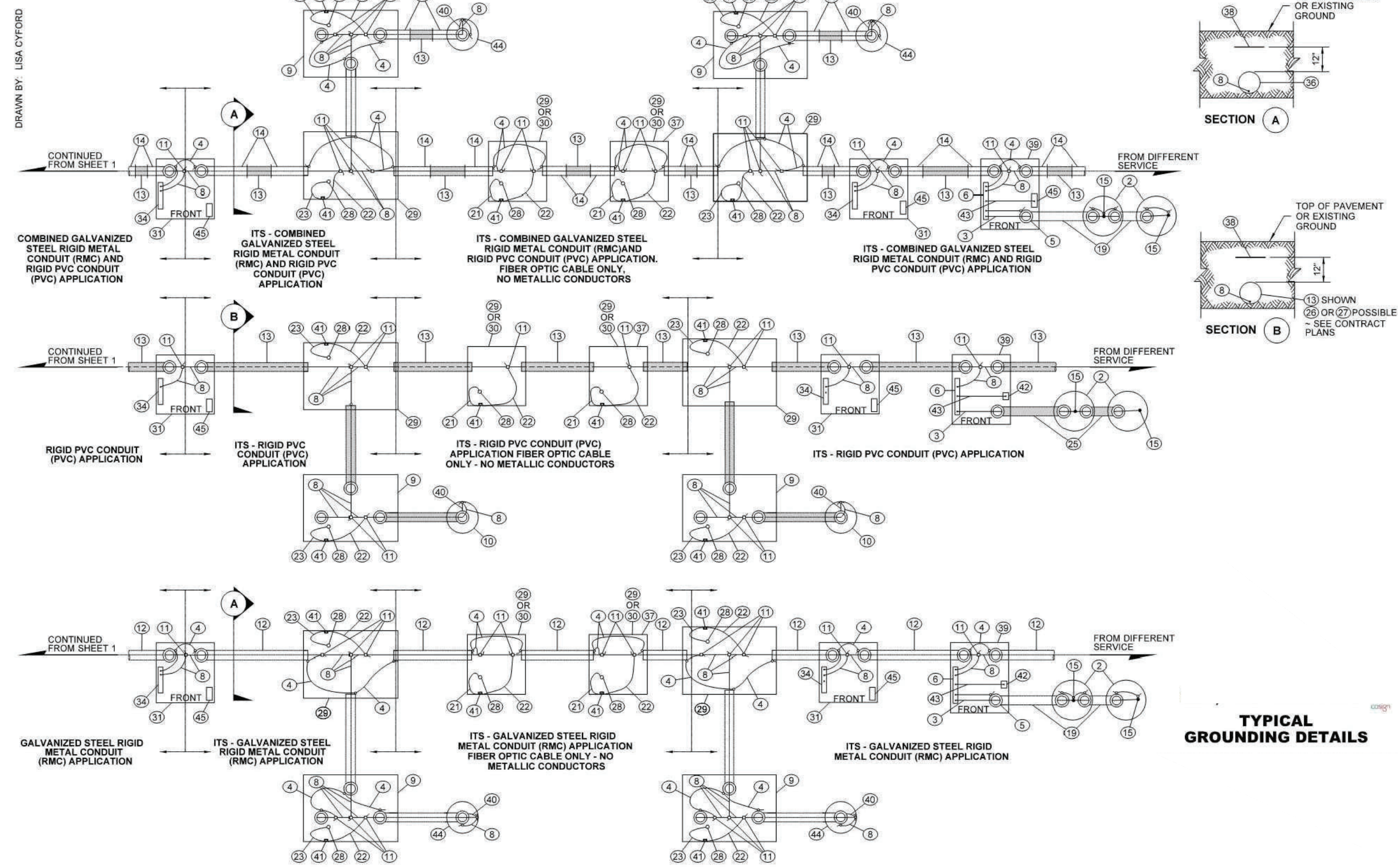
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SHEET **36** OF **50**

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NOTES

- If parallel circuits of different sizes are contained in one conduit, the size of the grounding conductor shall be determined on the basis of the largest conductor. Only one grounding conductor is required for each conduit, regardless of the number of circuits contained.
- Service ground per serving utility requirement. If the utility uses aluminum service conductors, an approved Al-Cu pressure-type ground connector shall be used to secure the service neutral to the copper neutral bar in the service enclosure. Except for the above, all grounding conductors shall be copper.
- Equipment grounding conductors and grounding electrode conductors shall be sized in accordance with the National Electrical Code (No. 8 minimum).

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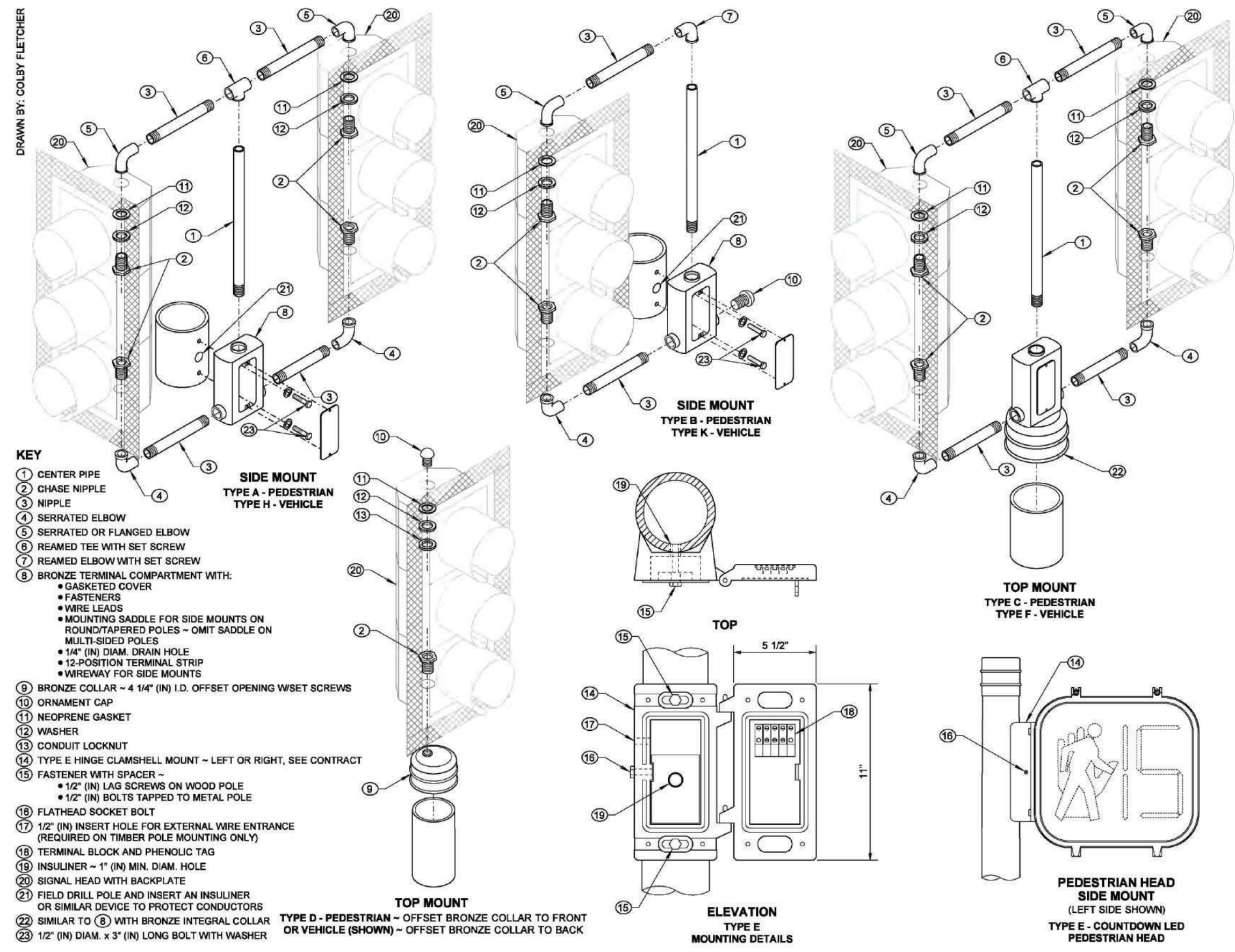
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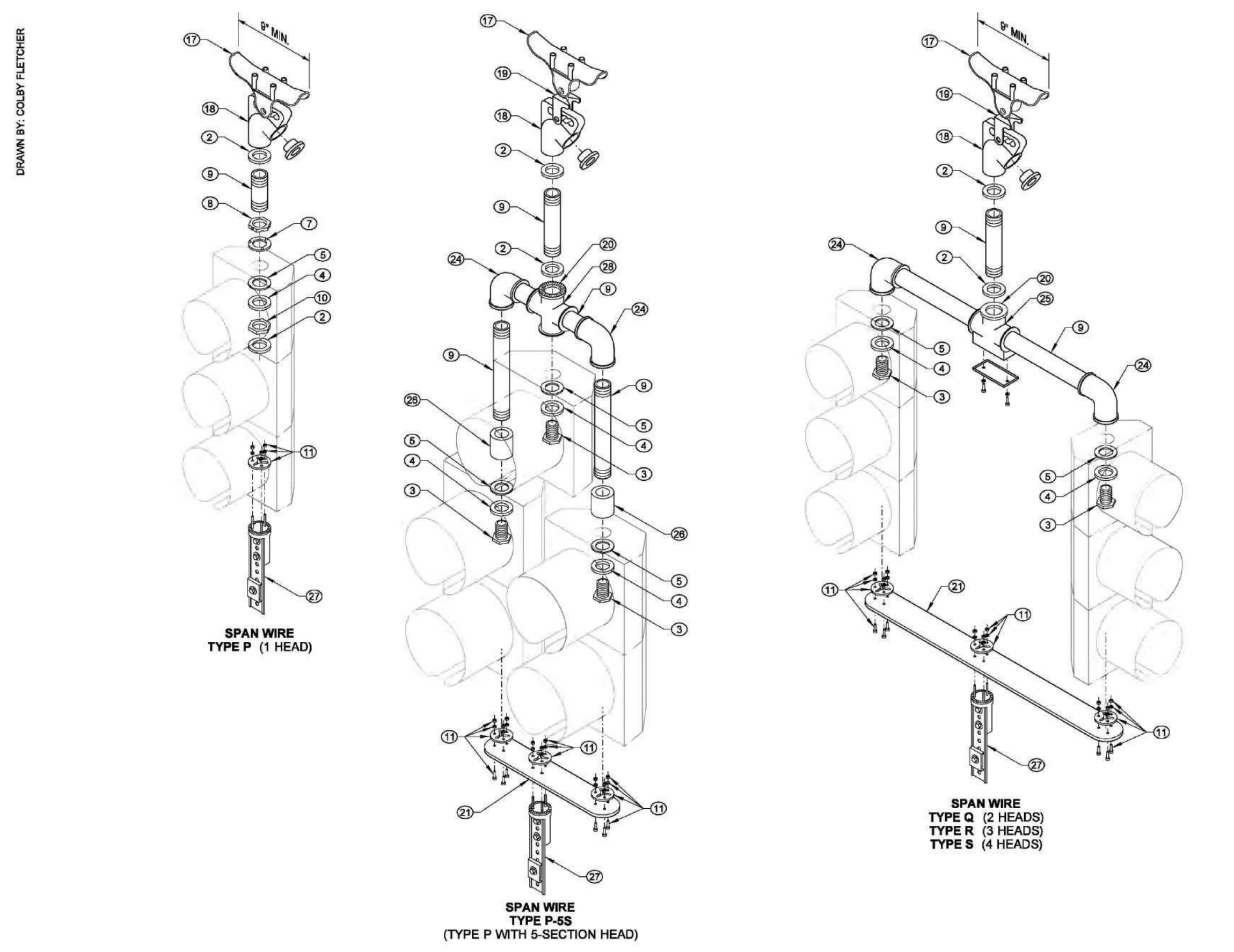


NOTES

- See Contract for head type, mounting height, and orientation.
- All nipples, fittings, and center pipes shall be 1 1/2" (in) diameter.
- Install neoprene gasket inside head when flanged elbows are supplied.
- Extend wire sheath a minimum of 1" (in) inside all signal and sign housings and terminal compartments.
- Apply bead of silicone to the serrated ring and around the perimeter of all top openings prior to installation of fittings.
- See Standard Specification 9-29.16 for backplate requirements. Where required, prismatic sheeting shall be applied in accordance with the manufacturer's recommendations. The application surface of the backplate shall be cleaned, degreased with isopropyl alcohol, and dried prior to application of the sheeting.
- Drill a 1/4" (in) drain hole in the bottom of each signal display assembly, and one in the bottom of each pedestrian head. When signal display assembly is mounted horizontally, drill a 1/4" (in) drain hole at the lowest point of each section of the signal assembly.

SIGNAL HEAD MOUNTING DETAILS - POLE AND POST TOP MOUNTINGS

NOTE: BACKPLATES NOT SHOWN FOR CLARITY



KEY

- METAL OR TIMBER POLE
- 2" (IN) x 3/16" (IN) S.S. TETHER WIRE BAND WITH TWO EACH
 - 3/8" (IN) - 16 NC x 3/4" (IN) S.S. HEX HEAD BOLT
 - LOCK WASHERS AND NUTS
- 5/16" (IN) EYE AND EYE TURNBUCKLE
- 3/8" (IN) MILD STEEL S HOOK
- 1/8" (IN) S.S. WIRE ROPE CLAMP (U-BOLT TYPE)
- 1/8" (IN) S.S. TETHER WIRE
- 1 1/2" (IN) BREAKAWAY TETHER ASSEMBLY WITH OPTIONAL EXTENDER BAR
- SIGNAL HEAD
- 6 x 8 LB/FT CHANNEL
- TWO EACH
 - 1/2" (IN) - 13 NC x 2 1/2" (IN) S.S. HEX HEAD BOLT
 - LOCK WASHERS (DRILL AND TAP POLE TO ACCEPT)
- WIREWAY (SEE DETAIL THIS SHEET)
- METAL POLE
- CABINET
- END BUSHING
- SEALING LOCKNUT
- WIRE ROPE THIMBLE
- CABINET WALL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE
- CHANNEL DRILLED 1/8" (IN) OVERSIZE OF NIPPLE
- 2" (IN) DIAM. x 4" (IN) NIPPLE (UNLESS OTHERWISE NOTED)
- POLE WALL DRILLED SO BUSHING WILL PASS THROUGH - HOLE SIZE TO BE A MAXIMUM OF 1/8" (IN) LARGER DIAMETER THAN THE CONDUIT NIPPLE END BUSHING - INSTALL NIPPLE IN POLE WITH BUSHING INSTALLED
- 6063 EXTRUDED ALUMINUM FRAME BLANK OUT SIGN WITH VISOR
- LIGHT EMITTING DIODE (LED) BLANK OUT SIGN
- TRANSLUCENT PLEXIGLASS SIGN FACE - SEE CONTRACT FOR LEGEND
- 1 1/2" (IN) CAST IRON HUB WITH 3/16" (IN) PIN AND COTTER KEY
- SPAN WIRE MOUNT ASSEMBLY WITH:
 - 1 1/2" (IN) DIAM. CONDUIT LOCKNUT
 - 1 1/2" (IN) DIAM. CONDUIT NIPPLE
 - BRONZE MESSENGER HANGER WITH:
 - 1/2" (IN) DIAM. J-BOLTS
 - CABLE LOCK BAR
 - RIVET
 - COTTER KEY
 - BRONZE INTERNALLY THREADED WIRE ENTRANCE WITH:
 - BUSHING INSERT
 - ALLEN HEAD S.S. SET SCREW
- ARM MOUNT ASSEMBLY WITH:
 - 1 1/2" (IN) DIAM. CONDUIT LOCKNUT
 - BRONZE SERRATED ELL FITTING WITH:
 - 3/8" (IN) S.S. THROUGH BOLT AND NUTS
 - THREE S.S. SET SCREWS AT SLIPFITTER CONNECTION
 - THREE ALLEN HEAD S.S. SET SCREWS AT CONDUIT NIPPLE CONNECTION
 - 1 1/2" (IN) DIAM. CONDUIT NIPPLE
 - SERRATED RING WITH NO PINS
- SIDE POLE MOUNT ASSEMBLY WITH:
 - 1 1/2" (IN) DIAM. CONDUIT LOCKNUT
 - 1 1/2" (IN) DIAM. CONDUIT NIPPLE
 - SERRATED RING WITH NO PINS
- 1 1/2" (IN) SERRATED ELBOW
- 1 1/2" (IN) DIAM. NIPPLE (DRILL AND TAP POLE TO ACCEPT)
- TWO EACH:
 - 1/2" (IN) - 20 NF x 3/4" (IN) S.S. HEX HEAD BOLT
 - LOCK WASHERS (DRILL AND TAP POLE TO ACCEPT)
- MOUNTING BRACKET
- LOCKNUT

LEGEND:
S.S. - STAINLESS STEEL

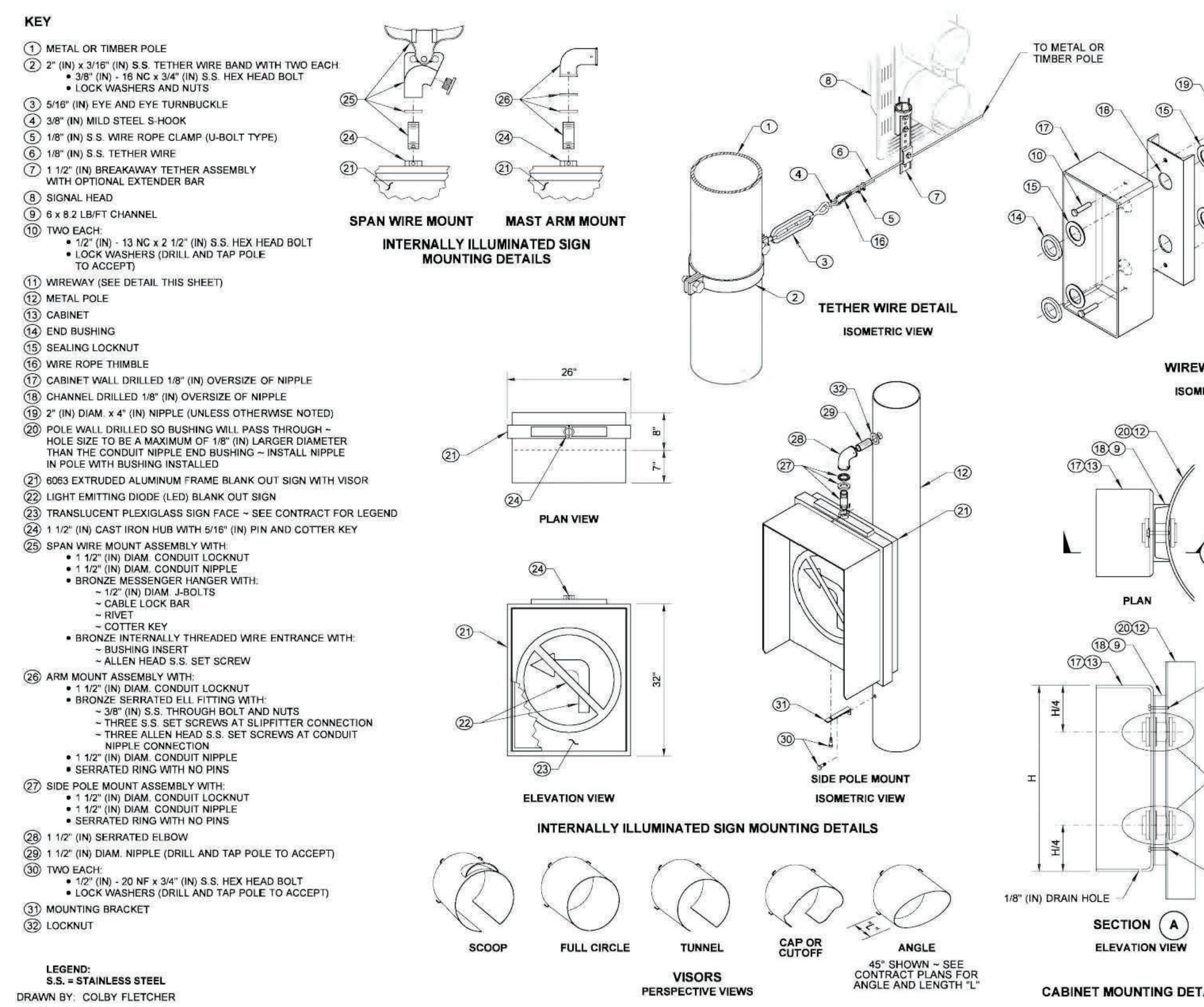
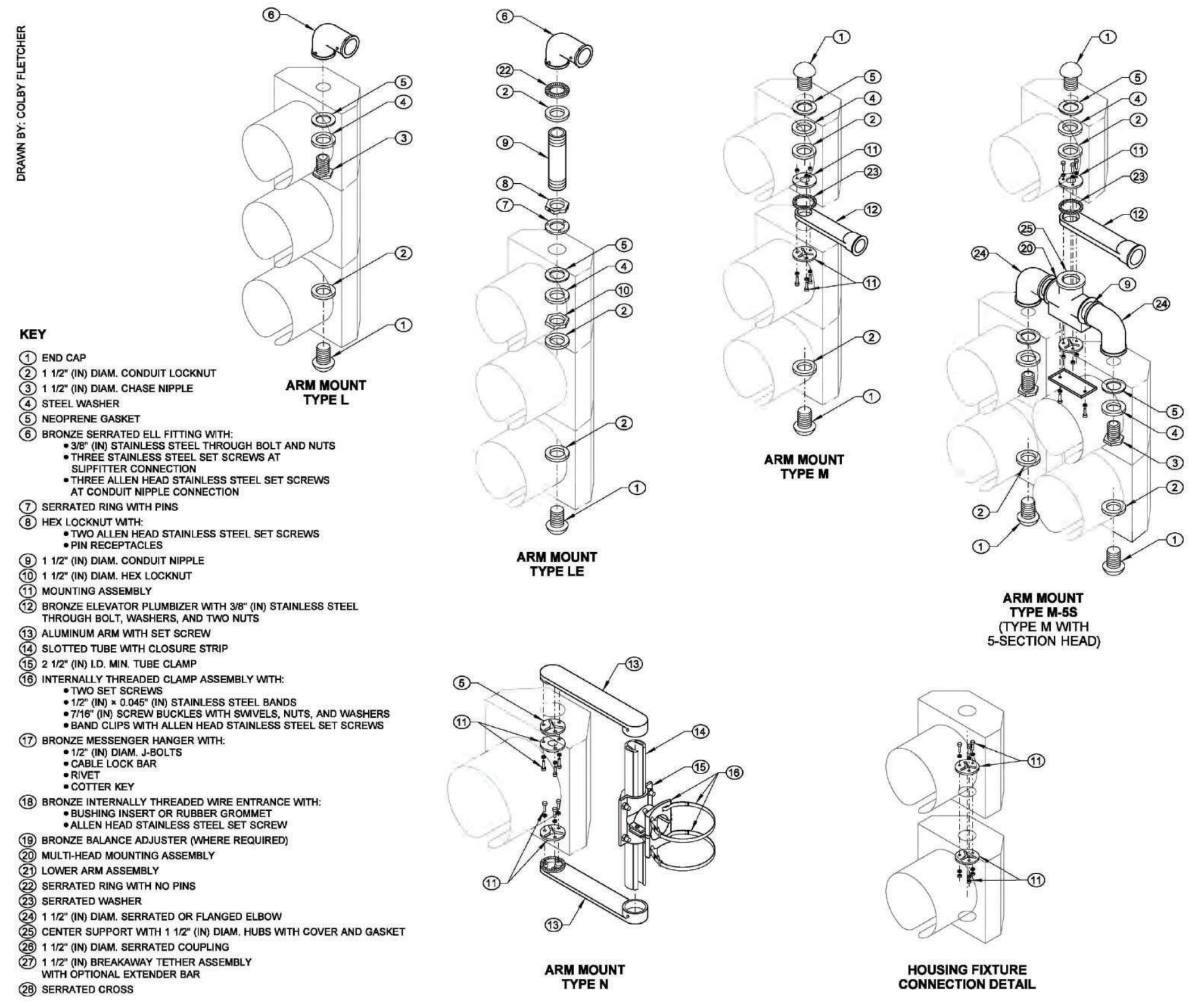
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NOTES

- Type M mounting shall have "O" ring groove and seal on top and bottom of signal attachment.
- Type M mounting for conventional heads shall have a 2" (in) diameter opening at the signal attachment.
- Type M mounting for optically programmed heads shall have a 3 1/2" (in) diameter opening at the signal attachment.
- Type N mounting with optically programmed heads shall be installed with 1/4" (in) nominal arms.
- See Standard Plan J-75.30 for tether wire and backplate requirements.
- Apply bead of silicone around the perimeter of all top end cap openings prior to installation of the end cap assembly.
- See Standard Specification 9-29.16 for backplate requirements. Where required, prismatic sheeting shall be applied in accordance with the manufacturer's recommendations. The application surface of the backplate shall be cleaned, degreased with isopropyl alcohol, and dried prior to application of the sheeting.
- Drill a 1/4" (in) drain hole in the bottom of each signal assembly. When signal display assembly is mounted horizontally, drill a 1/4" (in) drain hole at the lowest point of each section of the signal assembly.

NOTE: BACKPLATES NOT SHOWN FOR CLARITY

SIGNAL HEAD MOUNTING DETAILS - MAST ARM AND SPAN WIRE MOUNTINGS

NOTES

- Backplates shall be installed with stainless steel screws and stainless steel washers.
- Silicone top of channel and around nipples at openings into pole.
- Breakaway tether extender bar shall extend one hole and one flat past tether wire.

LEGEND:
S.S. - STAINLESS STEEL

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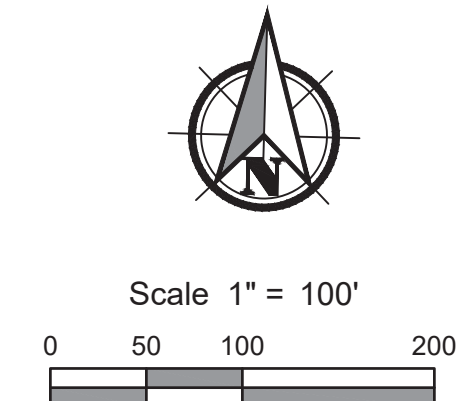
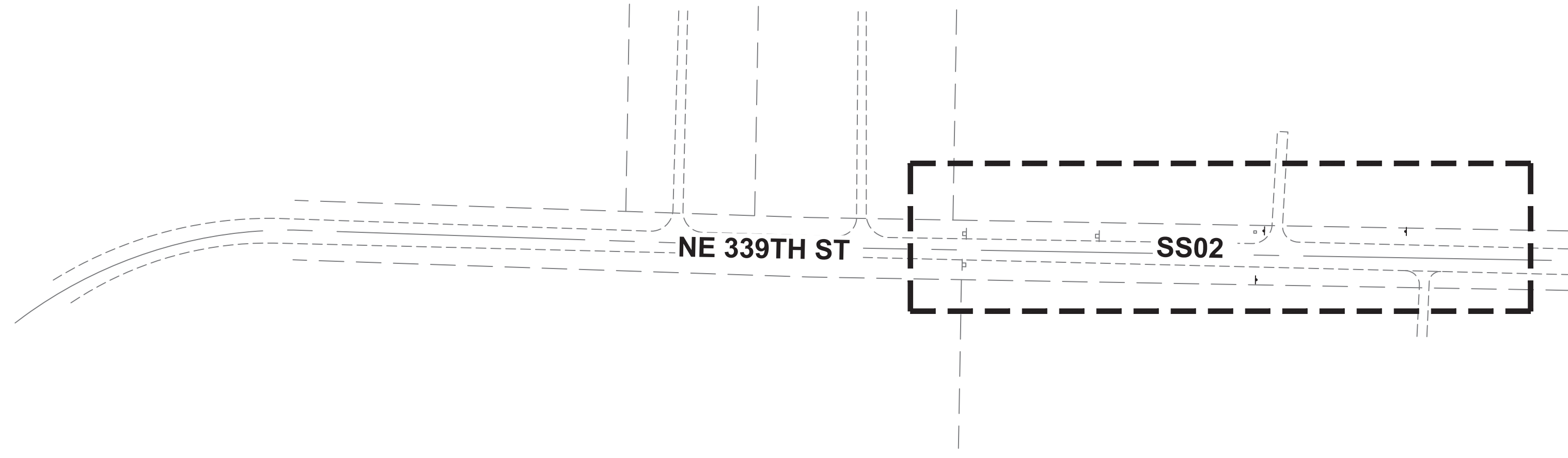
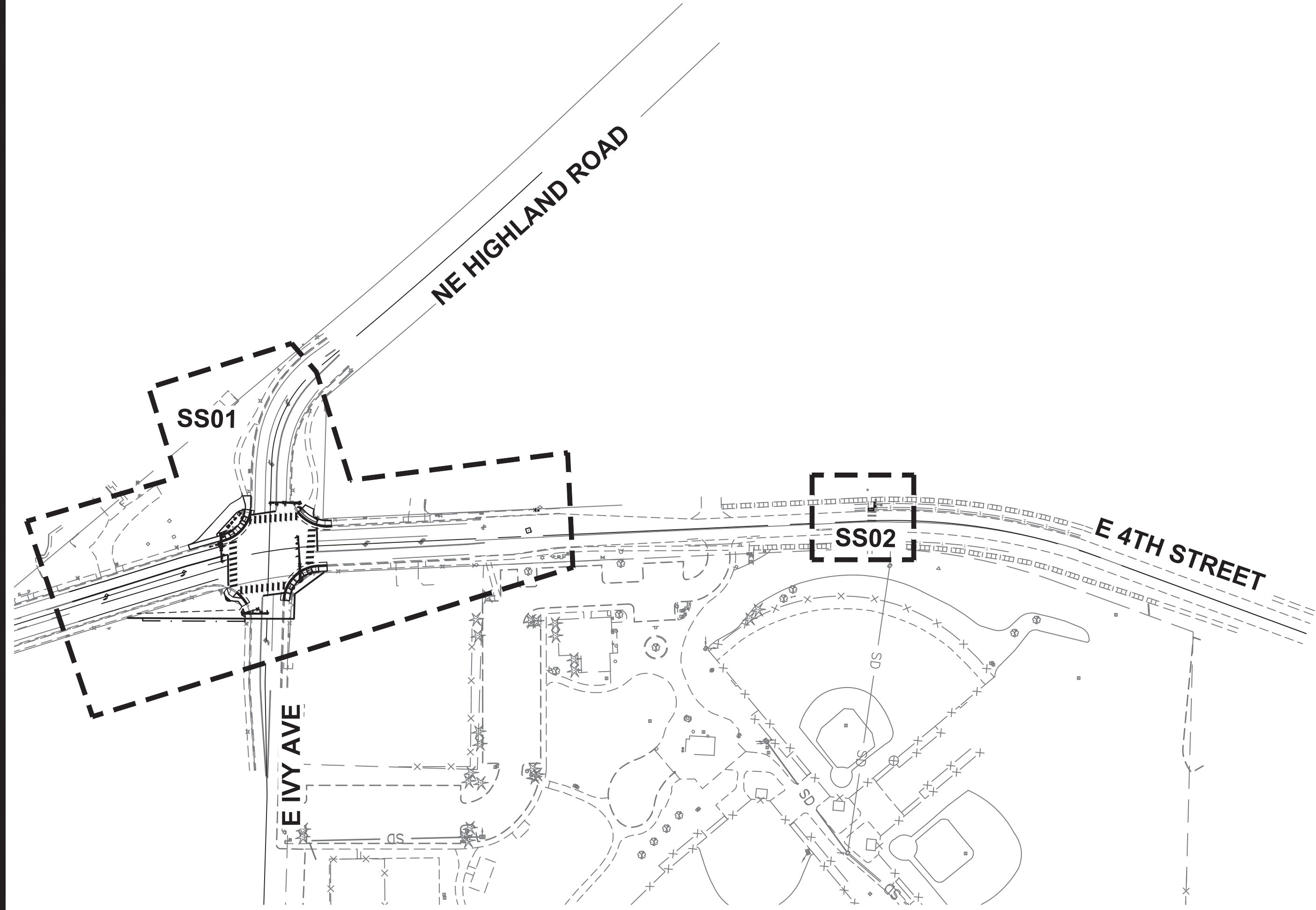
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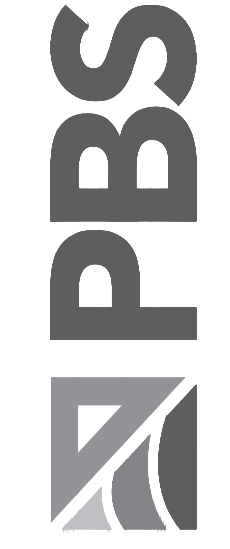
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FINAL PLANS

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PBS Engineering and Environmental Inc.
1325 SE Tech Center Drive
Vancouver, WA 98683
360.895.3488
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SIGNING AND STRIPING KEY SHEET FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



DESIGNED: B./BMK/ASW
CHECKED: DAH
MAY 2024 71486.000
SHEET ID SS00
SHEET 39 OF 50

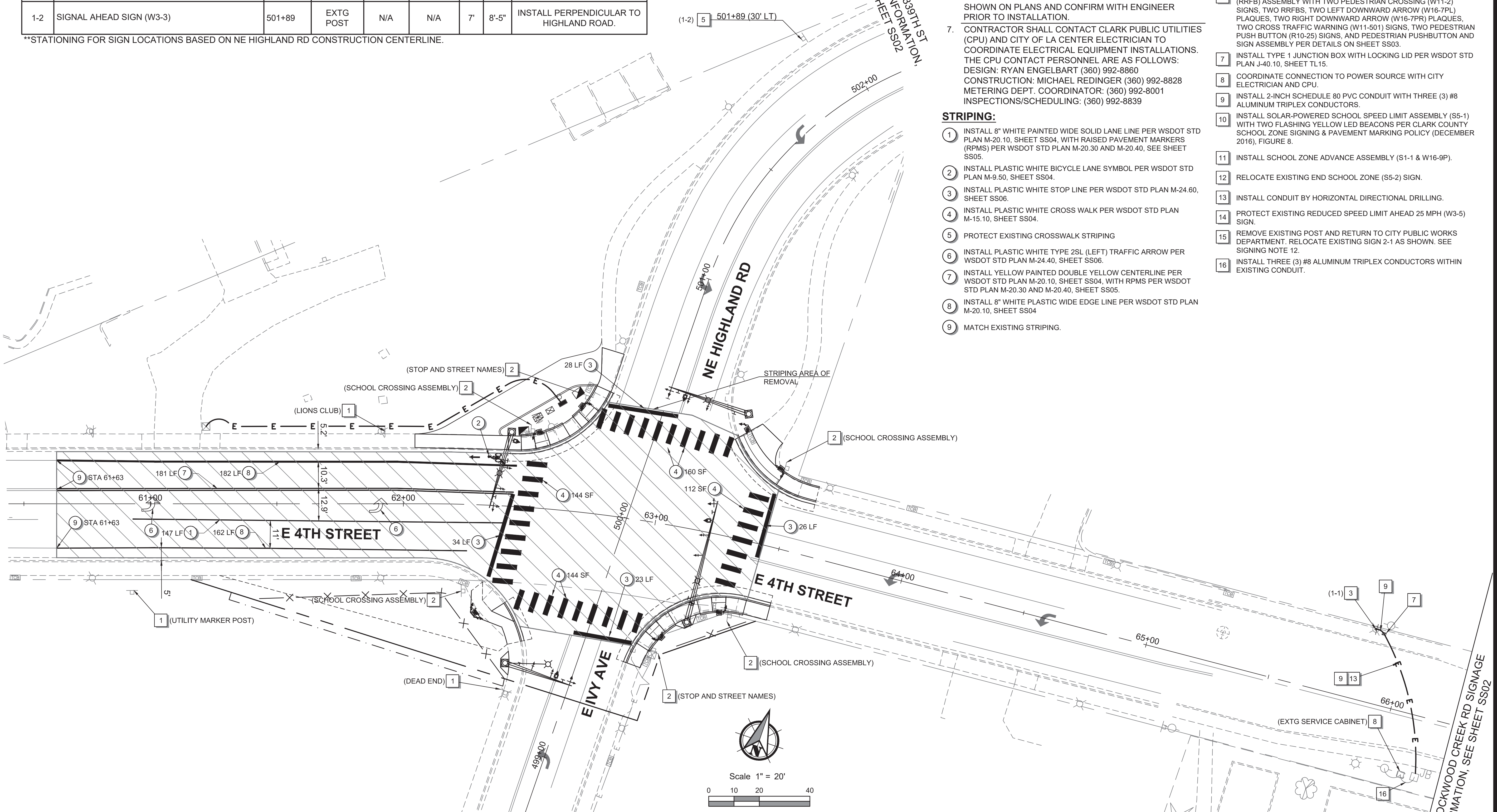
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 Layout Tab: SS01

Roadside Sign Specifications - 4th Street								
Sign #	Sign Code / Description	Location*	Post Material	Post Size (IN)	Post Length (FT)		Clearance (FT)	Remarks
					H	V		
1-1	RADAR SPEED FEEDBACK SIGN	65+86	EXTG LIGHT POLE	N/A	N/A	7'	5'-6"	INSTALL PERPENDICULAR TO 4TH STREET.

*STATIONING FOR SIGN LOCATIONS BASED ON 4TH STREET CONSTRUCTION CENTERLINE.

Roadside Sign Specifications - Highland Road								
Sign #	Sign Code / Description	Location**	Post Material	Post Size (IN)	Post Length (FT)		Clearance (FT)	Remarks
					H	V		
1-2	SIGNAL AHEAD SIGN (W3-3)	501+89	EXTG POST	N/A	N/A	7'	8'-5"	INSTALL PERPENDICULAR TO HIGHLAND ROAD.

**STATIONING FOR SIGN LOCATIONS BASED ON NE HIGHLAND RD CONSTRUCTION CENTERLINE.



STRIPING AND SIGNING NOTES:

GENERAL NOTES:

- SEE SIGN INSTALLATION DETAIL, SHEET SS03, FOR ALL PROPOSED SIGN INSTALLATIONS.
- REMOVE ALL STRIPING WITHIN STRIPING REMOVAL AREA SHOWN. PROTECT ALL OTHER STRIPING.
- SEE SHEETS TL01 TO TL17 FOR TRAFFIC SIGNAL PLANS.
- SEE SHEET TL04 FOR TRAFFIC SIGNAL WIRING DETAILS.
- SEE SHEET GR02 FOR ADA RAMP GRADING.
- CONTRACTOR SHALL USE NON-DESTRUCTIVE POTHOLE METHODS TO LOCATE UTILITIES NEAR ANY UNDERGROUND WORK. INSTALL SIGN EQUIPMENT AROUND CONFLICTING UTILITIES THAT MAY NOT BE SHOWN ON PLANS AND CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.
- CONTRACTOR SHALL CONTACT CLARK PUBLIC UTILITIES (CPU) AND CITY OF LA CENTER ELECTRICIAN TO COORDINATE ELECTRICAL EQUIPMENT INSTALLATIONS. THE CPU CONTACT PERSONNEL ARE AS FOLLOWS:
 DESIGN: RYAN ENGELBART (360) 992-8860
 CONSTRUCTION: MICHAEL REDINGER (360) 992-8828
 METERING DEPT. COORDINATOR: (360) 992-8001
 INSPECTIONS/SCHEDULING: (360) 992-8839

STRIPING:

- INSTALL 8" WHITE PAINTED WIDE SOLID LANE LINE PER WSDOT STD PLAN M-20.10, SHEET SS04, WITH RAISED PAVEMENT MARKERS (RPMs) PER WSDOT STD PLAN M-20.30 AND M-20.40, SEE SHEET SS05.
- INSTALL PLASTIC WHITE BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9.50, SHEET SS04.
- INSTALL PLASTIC WHITE STOP LINE PER WSDOT STD PLAN M-24.60, SHEET SS06.
- INSTALL PLASTIC WHITE CROSS WALK PER WSDOT STD PLAN M-15.10, SHEET SS04.
- PROTECT EXISTING CROSSWALK STRIPING
- INSTALL PLASTIC WHITE TYPE 2SL (LEFT) TRAFFIC ARROW PER WSDOT STD PLAN M-24.40, SHEET SS06.
- INSTALL YELLOW PAINTED DOUBLE YELLOW CENTERLINE PER WSDOT STD PLAN M-20.10, SHEET SS04, WITH RPMs PER WSDOT STD PLAN M-20.30 AND M-20.40, SHEET SS05.
- INSTALL 8" WHITE PLASTIC WIDE EDGE LINE PER WSDOT STD PLAN M-20.10, SHEET SS04
- MATCH EXISTING STRIPING.

SIGNING:

- PROTECT EXISTING SIGN.
- REMOVE EXISTING POST AND SIGN AND RETURN TO CITY PUBLIC WORKS DEPARTMENT.
- INSTALL RADAR SPEED FEEDBACK SIGN WITH DIRECTIONAL RADAR UNIT INCLUDING A "YOUR SPEED" BLACK LEGEND ON A YELLOW BACKGROUND AND AN LED SPEED INDICATOR THAT DISPLAYS THE APPROACHING VEHICLE'S SPEED AND FLASHES WHEN THE VEHICLE'S SPEED EXCEEDS THE POSTED SPEED LIMIT.
- INSTALL 2-INCH SCHEDULE 40 PVC CONDUIT FROM EXISTING UTILITY POLE TO RADAR SPEED FEEDBACK SIGN. INSTALL CPU-APPROVED METER AND DISCONNECT CABINET ON EXISTING UTILITY POLE. CPU SHALL PROVIDE POWER SERVICE TO CABINET (ASSUMED TO BE OVERHEAD FROM SOURCE NOTED). COORDINATE WITH CPU.
- REMOVE EXISTING STOP AHEAD (W3-1) SIGN ONLY. INSTALL SIGNAL AHEAD (W3-3) SIGN ON EXISTING POST.
- INSTALL BI-DIRECTIONAL RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLY WITH TWO PEDESTRIAN CROSSING (W11-2) SIGNS, TWO RRFBS, TWO LEFT DOWNWARD ARROW (W16-7PL) PLAQUES, TWO RIGHT DOWNWARD ARROW (W16-7PR) PLAQUES, TWO CROSS TRAFFIC WARNING (W11-501) SIGNS, TWO PEDESTRIAN PUSH BUTTON (R10-25) SIGNS, AND PEDESTRIAN PUSHBUTTON AND SIGN ASSEMBLY PER DETAILS ON SHEET SS03.
- INSTALL TYPE 1 JUNCTION BOX WITH LOCKING LID PER WSDOT STD PLAN J-40.10, SHEET TL15.
- COORDINATE CONNECTION TO POWER SOURCE WITH CITY ELECTRICIAN AND CPU.
- INSTALL 2-INCH SCHEDULE 80 PVC CONDUIT WITH THREE (3) #8 ALUMINUM TRIPLEX CONDUCTORS.
- INSTALL SOLAR-POWERED SCHOOL SPEED LIMIT ASSEMBLY (S5-1) WITH TWO FLASHING YELLOW LED BEACONS PER CLARK COUNTY SCHOOL ZONE SIGNING & PAVEMENT MARKING POLICY (DECEMBER 2016), FIGURE 8.
- INSTALL SCHOOL ZONE ADVANCE ASSEMBLY (S1-1 & W16-9P).
- RELOCATE EXISTING END SCHOOL ZONE (S5-2) SIGN.
- INSTALL CONDUIT BY HORIZONTAL DIRECTIONAL DRILLING.
- PROTECT EXISTING REDUCED SPEED LIMIT AHEAD 25 MPH (W3-5) SIGN.
- REMOVE EXISTING POST AND RETURN TO CITY PUBLIC WORKS DEPARTMENT. RELOCATE EXISTING SIGN 2-1 AS SHOWN. SEE SIGNING NOTE 12.
- INSTALL THREE (3) #8 ALUMINUM TRIPLEX CONDUCTORS WITHIN EXISTING CONDUIT.

FINAL PLANS

SIGNING AND STRIPING PLAN FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



DESIGNED:
 BJB/MK/ASW
 CHECKED:
 DAH
 MAY 2024
 71486.000

SHEET ID
SS01

SHEET **40** OF **50**

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FOR E 4TH ST / E HIGHLAND RD SIGNAGE INFORMATION, SEE SHEET SS01

FOR E 4TH ST / E HIGHLAND RD SIGNAGE INFORMATION, SEE SHEET SS01

1001 E 4TH ST
CITY OF LA CENTER
PARCEL #62965253

NE LOCKWOOD CREEK RD

CITY OF LA CENTER
PARCEL #62965251

1652 NE 339TH ST
CEMETERY
DISTRICT #6
PARCEL
#259123000

LA CENTER SCHOOL
DIST #101
PARCEL #209078000

STRIPING AND SIGNING NOTES:

GENERAL NOTES:

- SEE SIGN INSTALLATION DETAIL, SHEET SS03, FOR ALL PROPOSED SIGN INSTALLATIONS.
- REMOVE ALL STRIPING WITHIN STRIPING REMOVAL AREA SHOWN. PROTECT ALL OTHER STRIPING.
- SEE SHEETS TL01 TO TL17 FOR TRAFFIC SIGNAL PLANS.
- SEE SHEET TL04 FOR TRAFFIC SIGNAL WIRING DETAILS.
- SEE SHEET GR02 FOR ADA RAMP GRADING.
- CONTRACTOR SHALL USE NON-DESTRUCTIVE POTHOLE METHODS TO LOCATE UTILITIES NEAR ANY UNDERGROUND WORK. INSTALL SIGN EQUIPMENT AROUND CONFLICTING UTILITIES THAT MAY NOT BE SHOWN ON PLANS AND CONFIRM WITH ENGINEER PRIOR TO INSTALLATION.
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STRIPING:

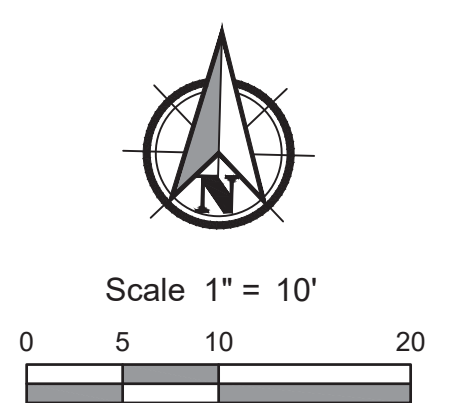
- INSTALL 8" WHITE PAINTED WIDE SOLID LANE LINE PER WSDOT STD PLAN M-20.10, SHEET SS04, WITH RAISED PAVEMENT MARKERS (RPMS) PER WSDOT STD PLAN M-20.30 AND M-20.40, SEE SHEET SS05.
- INSTALL PLASTIC WHITE BICYCLE LANE SYMBOL PER WSDOT STD PLAN M-9.50, SHEET SS04.

- INSTALL PLASTIC WHITE STOP LINE PER WSDOT STD PLAN M-24.60, SHEET SS06.
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- INSTALL PLASTIC WHITE TYPE ZSL (LEFT) TRAFFIC ARROW PER WSDOT STD PLAN M-24.40, SHEET SS06.
- INSTALL YELLOW PAINTED DOUBLE YELLOW CENTERLINE PER WSDOT STD PLAN M-20.10, SHEET SS04, WITH RPMS PER WSDOT STD PLAN M-20.30 AND M-20.40, SHEET SS05.
- INSTALL 8" WHITE PLASTIC WIDE EDGE LINE PER WSDOT STD PLAN M-20.10, SHEET SS04
- MATCH EXISTING STRIPING.

SIGNING:

- PROTECT EXISTING SIGN.
- REMOVE EXISTING POST AND SIGN AND RETURN TO CITY PUBLIC WORKS DEPARTMENT.
- INSTALL RADAR SPEED FEEDBACK SIGN WITH DIRECTIONAL RADAR UNIT INCLUDING A "YOUR SPEED" BLACK LEGEND ON A YELLOW BACKGROUND AND AN LED SPEED INDICATOR THAT DISPLAYS THE APPROACHING VEHICLE'S SPEED AND FLASHES WHEN THE VEHICLE'S SPEED EXCEEDS THE POSTED SPEED LIMIT.
- INSTALL 2-INCH SCHEDULE 40 PVC CONDUIT FROM EXISTING UTILITY POLE TO RADAR SPEED FEEDBACK SIGN. INSTALL CPU-APPROVED METER AND DISCONNECT CABINET ON EXISTING UTILITY POLE. CPU SHALL PROVIDE POWER SERVICE TO CABINET (ASSUMED TO BE OVERHEAD FROM SOURCE NOTED). COORDINATE WITH CPU.
- REMOVE EXISTING STOP AHEAD (W3-1) SIGN ONLY. INSTALL SIGNAL AHEAD (W3-3) SIGN ON EXISTING POST.

- INSTALL BI-DIRECTIONAL RECTANGULAR RAPID FLASHING BEACON (RRFB) ASSEMBLY WITH TWO PEDESTRIAN CROSSING (W11-2) SIGNS, TWO RRFBS, TWO LEFT DOWNWARD ARROW (W16-7PL) PLAQUES, TWO RIGHT DOWNWARD ARROW (W16-7PR) PLAQUES, TWO CROSS TRAFFIC WARNING (W11-501) SIGNS, TWO PEDESTRIAN PUSH BUTTON (R10-25) SIGNS, AND PEDESTRIAN PUSHBUTTON AND SIGN ASSEMBLY PER DETAILS ON SHEET SS03.
- INSTALL TYPE 1 JUNCTION BOX WITH LOCKING LID PER WSDOT STD PLAN J-40.10, SHEET TL15.
- COORDINATE CONNECTION TO POWER SOURCE WITH CITY ELECTRICIAN AND CPU.
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- INSTALL SOLAR-POWERED SCHOOL SPEED LIMIT ASSEMBLY (S5-1) WITH TWO FLASHING YELLOW LED BEACONS PER CLARK COUNTY SCHOOL ZONE SIGNING & PAVEMENT MARKING POLICY (DECEMBER 2016), FIGURE 8.
- INSTALL SCHOOL ZONE ADVANCE ASSEMBLY (S1-1 & W16-9P).
- RELOCATE EXISTING END SCHOOL ZONE (S5-2) SIGN.
- INSTALL CONDUIT BY HORIZONTAL DIRECTIONAL DRILLING.
- PROTECT EXISTING REDUCED SPEED LIMIT AHEAD 25 MPH (W3-5) SIGN.
- REMOVE EXISTING POST AND RETURN TO CITY PUBLIC WORKS DEPARTMENT. RELOCATE EXISTING SIGN 2-1 AS SHOWN. SEE SIGNING NOTE 12.
- INSTALL THREE (3) #8 ALUMINUM TRIPLEX CONDUCTORS WITHIN EXISTING CONDUIT.



Sign #	Sign Code / Description	Location	Post Material	Post Size (IN)	Post Length (FT)			Clearance (FT)	Remarks
					H	V	W		
2-1	END SCHOOL ZONE SIGN (S5-2)	SEE PLAN VIEW	PSST	2	10.5'	7'	13'		INSTALL EXISTING SIGN ON NEW POST. PERPENDICULAR TO NE 339TH STREET
2-2	SCHOOL SPEED LIMIT 20 WHEN FLASHING (S5-1)	SEE PLAN VIEW	-	-	-	8'-6"	13'		INSTALL PERPENDICULAR TO NE 339TH STREET AS PART OF SCHOOL SPEED LIMIT ASSEMBLY PER CLARK COUNTY SCHOOL ZONE SIGNING & PAVEMENT MARKING POLICY (DECEMBER 2016), FIGURE 8. INSTALL SIGN 2-2 ABOVE SIGN 2-3.
2-3	FINES DOUBLE (R2-6aP)	SEE PLAN VIEW	-	-	-	7'	13'		
2-4	SCHOOL SIGN (S1-1)	SEE PLAN VIEW	PSST	2	12'	8'	13'-6"		INSTALL PERPENDICULAR TO NE 339TH STREET. INSTALL SIGN 2-4 ABOVE SIGN 2-5.
2-5	AHEAD SIGN (W16-9P)	SEE PLAN VIEW	PSST	2	12'	7'	13'-6"		

NE 339TH ST

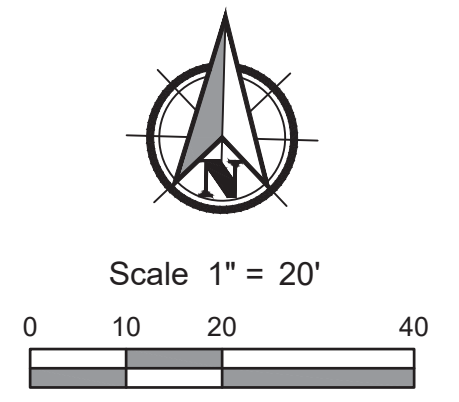
NE 339TH ST

1819 NE 339TH ST
MANNING, KENNETH & DEBRA
PARCEL #209048000

1819 NE 339TH ST
MANNING, KENNETH & DEBRA
PARCEL #209048000

1816 NE 339TH ST
MANNING, KENNETH & DEBRA
PARCEL #62965251

1816 NE 339TH ST
MANNING, KENNETH & DEBRA
PARCEL #62965251

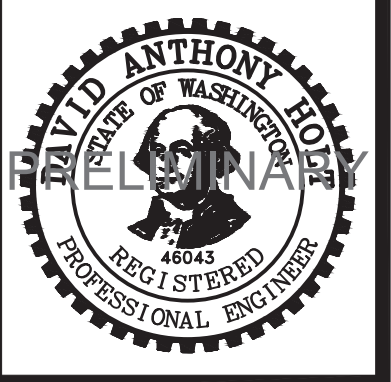
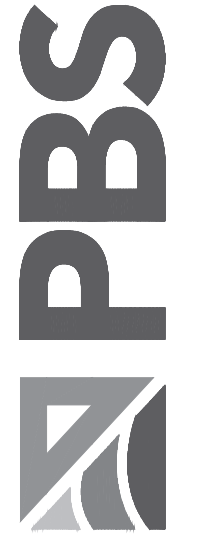


FINAL PLANS

SIGNING AND STRIPING PLAN FOR:

4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON

PBS Engineering and Environmental Inc.
 1325 SE Tech Center Drive
 Vancouver, WA 98683
 360.895.3488
 pbsusa.com

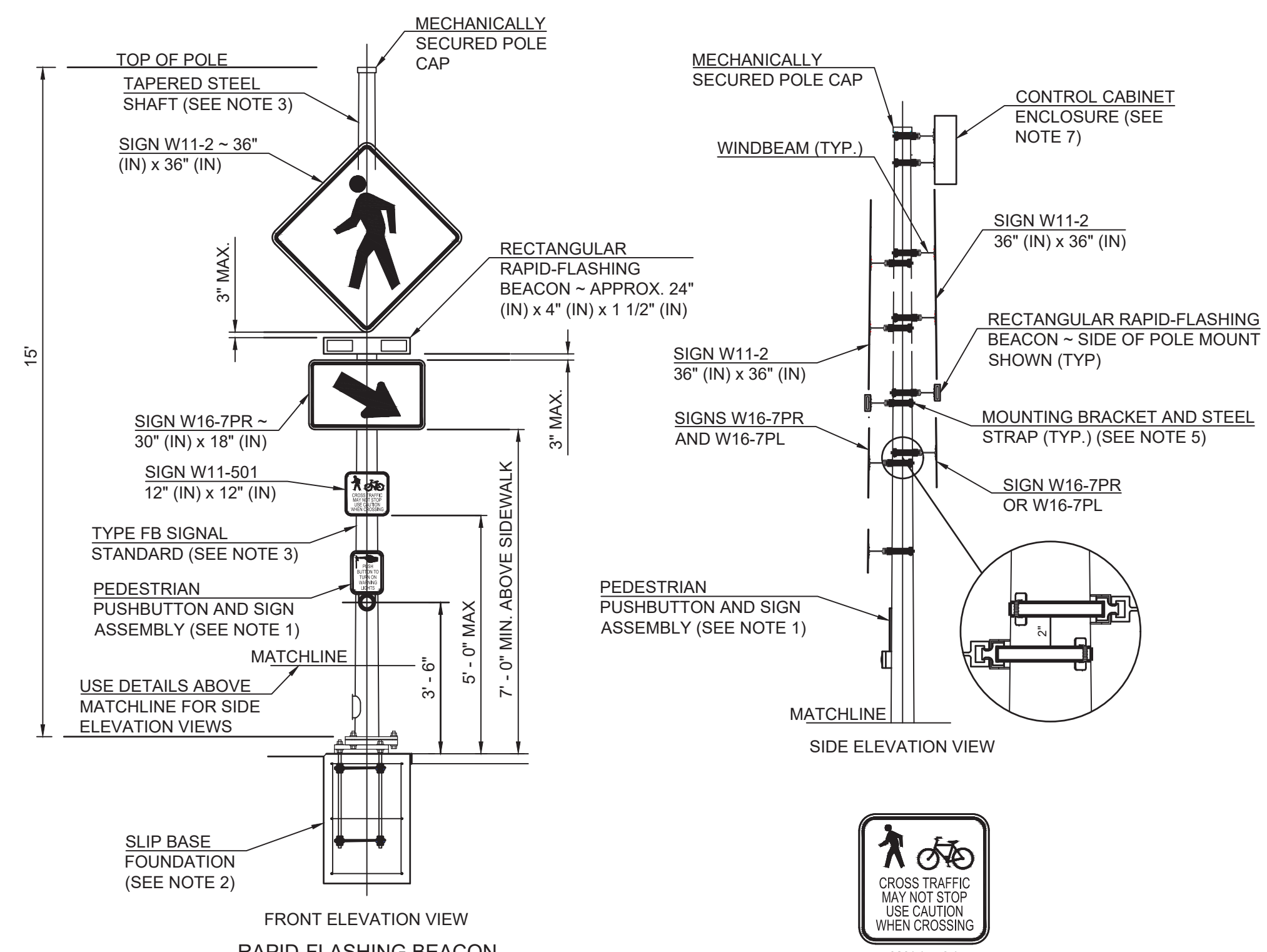


DESIGNED:
BJ/BMK/ASV
CHECKED:
DAH
MAY 2024
71486.000

SHEET ID
SS02

SHEET 41 OF 50

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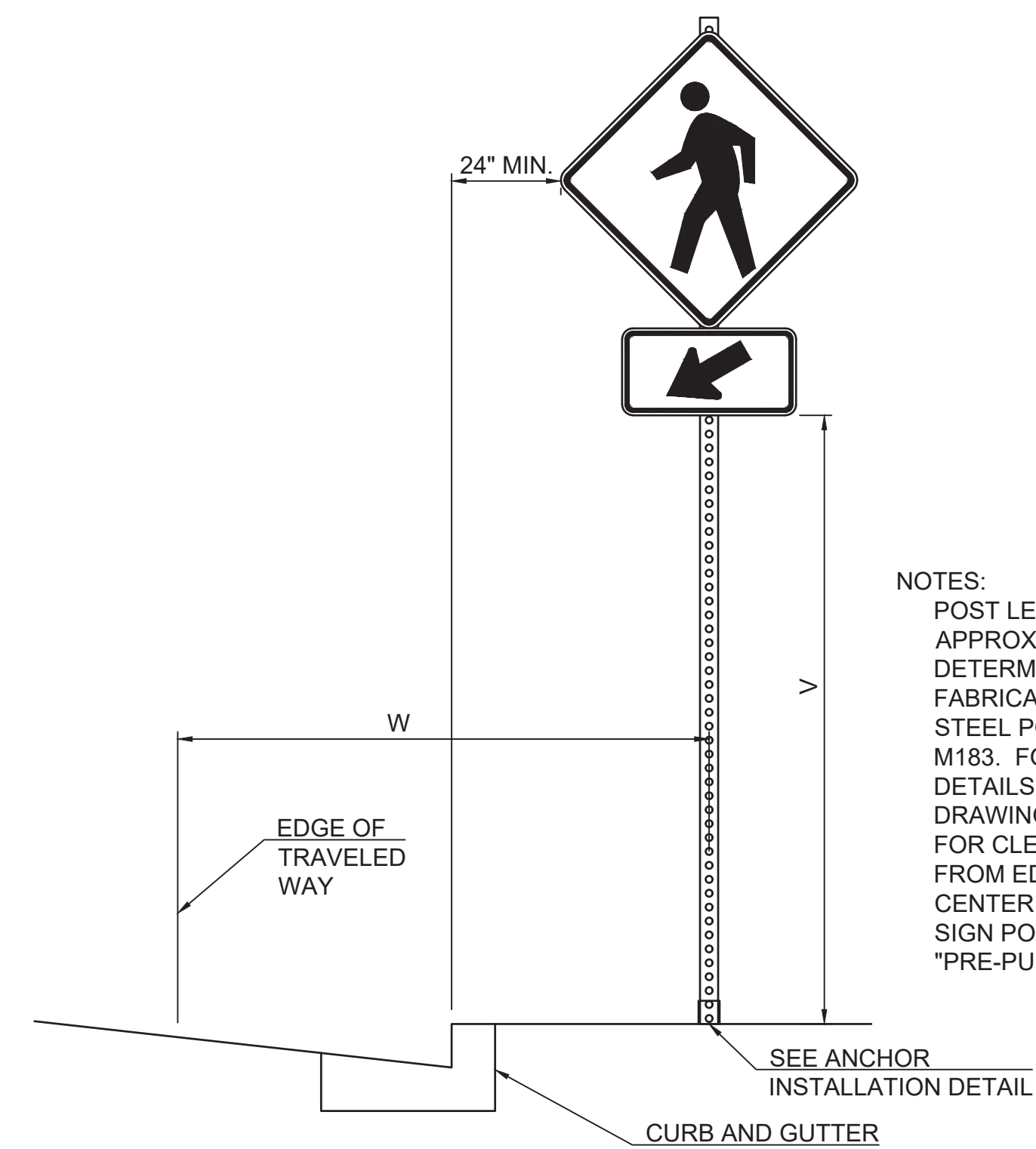
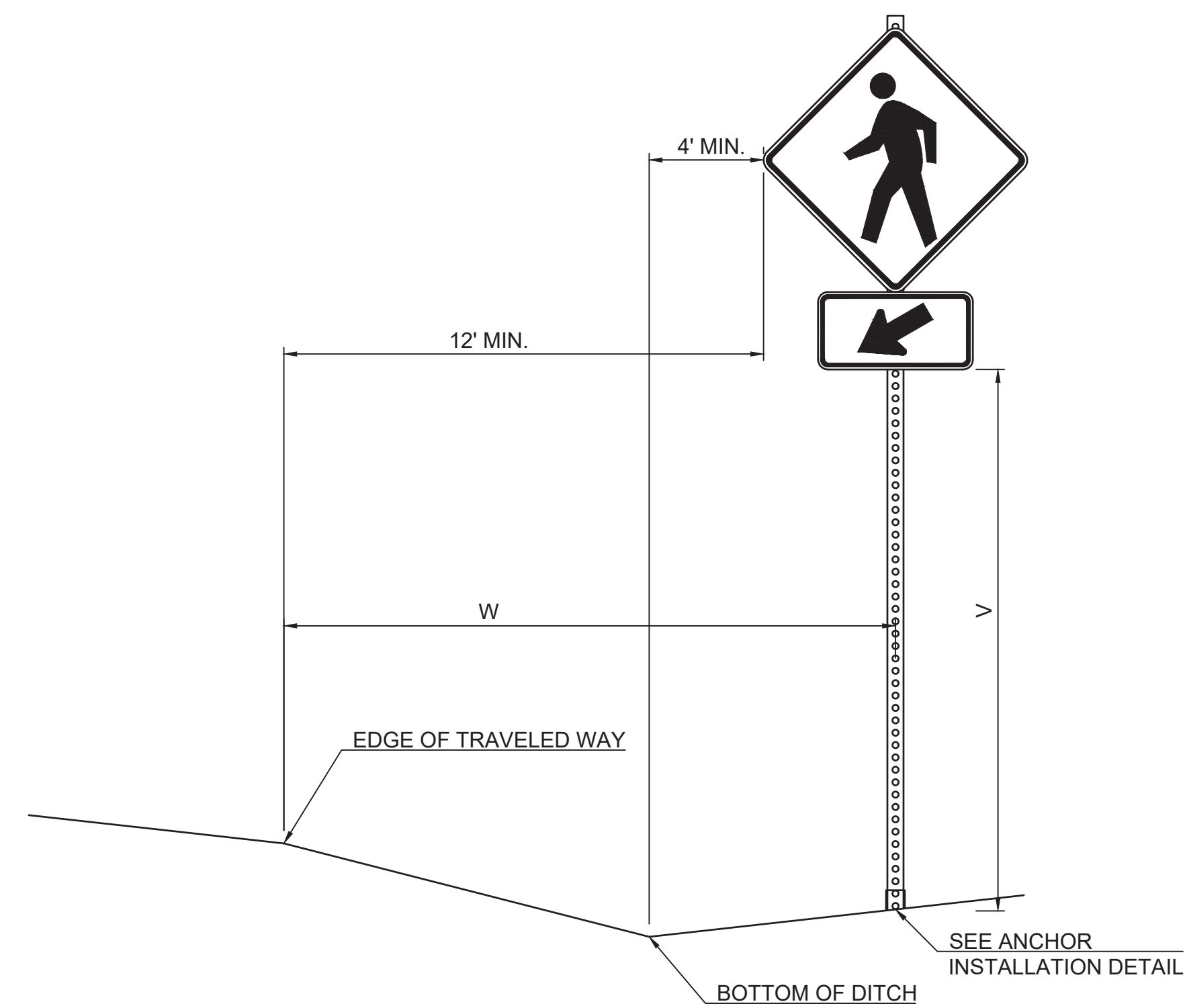
- NOTES
1. PEDESTRIAN PUSHBUTTON AND SIGN ASSEMBLY - MAY BE SEPARATE PARTS. USE 9" X 12" (IN) R10-25 SIGN IN ACCORDANCE WITH 2009 MUTCD. SEE WSDOT STD PLAN J-20.26, SHEET TL13, EXCEPT USE PUSHBUTTON FRAME ADAPTER FOR 12" SIGN HEIGHT
 2. SEE WSDOT STD PLAN J-21.10, SHEET TL13, FOR SIGNAL STANDARD FOUNDATION WITH SLIP BASE DETAILS.
 3. SEE WSDOT STD PLAN J-21.16, SHEET TL13, FOR SIGNAL STANDARD DETAILS NOT SHOWN.
 4. SEE WSDOT STD PLAN J-21.17 DETAIL C, SHEET TL13, FOR WIRING DETAILS NOT SHOWN.
 5. SEE WSDOT STD PLAN G-30.10, SHEET TL09, FOR SIGN INSTALLATION ON SIGNAL STANDARD DETAILS.
 6. TERMINATE RRFB CONNECTIONS PER MANUFACTURER'S RECOMMENDATION
 7. CONTROL CABINET ENCLOSURE SHALL BE SIZED BY THE RRFB MANUFACTURER. THE CONTROL CABINET SHALL BE MANUFACTURED PER TERMINAL CABINET REQUIREMENTS OF SECTION 9-29.25.
 8. RRFB DISPLAYS SHALL BE LED TYPE MEETING THE INTENSITY REQUIREMENTS OF SAE J595 FOR CLASS 1 YELLOW, BUT SHALL NOT EXCEED 1000 CANDELAS DURING DAYLIGHT AND 500 CANDELAS AFTER DARK.

- NOTES
1. ALL SIGNS SHALL CONFORM WITH THE MUTCD.
 2. ALL SIGNS SHALL BE MUTCD STANDARD SIZE WITH TYPE IV SHEETING UNLESS OTHERWISE NOTED.
 3. SEE TRAFFIC SIGNAL SHEETS TL01-TL17 FOR SIGNS MOUNTED OVERHEAD ON TRAFFIC SIGNAL MAST ARMS.
 4. FOR RRFB INSTALLATIONS, SEE RRFB DETAILS, THIS SHEET.

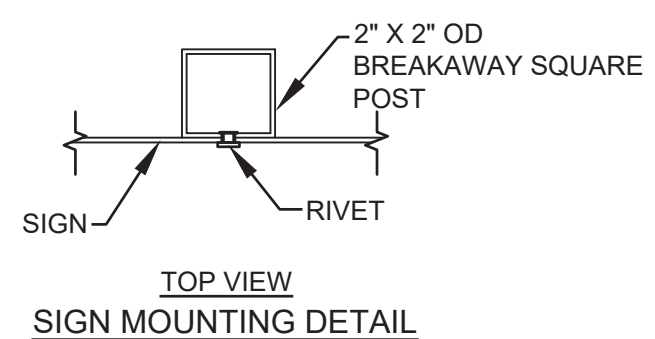
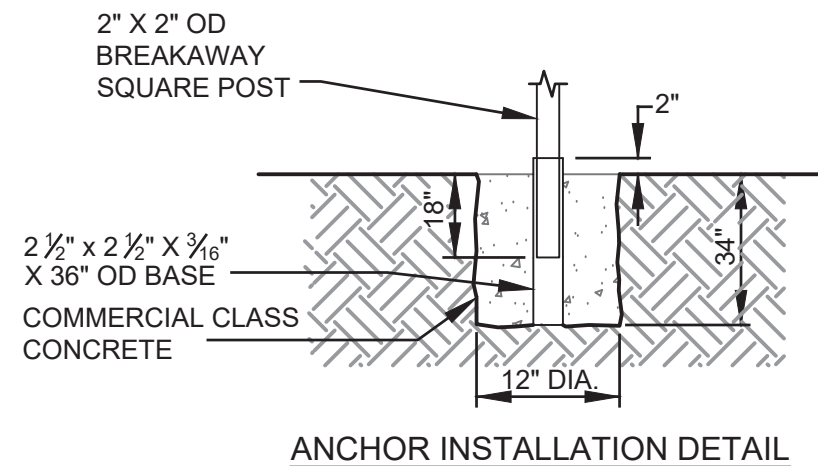
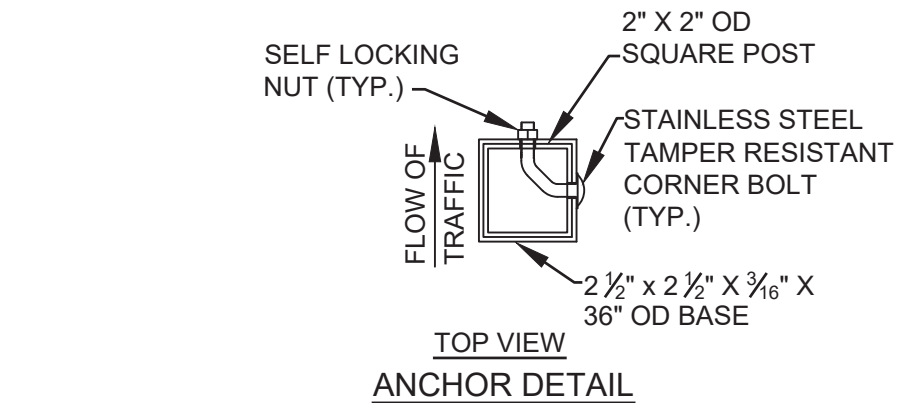


W11-501
(12" x 12")
PEDESTRIAN SYMBOL HEIGHT - 4" (IN)
BICYCLE SYMBOL HEIGHT - 3" (IN)
LETTERS - 1" C
LEGEND - BLACK
BACKGROUND - YELLOW

RRFB DETAILS
NTS

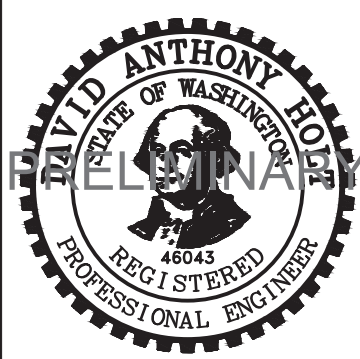


- NOTES:
- POST LENGTHS SHOWN ARE APPROXIMATE; FINAL VALUES SHALL BE DETERMINED IN THE FIELD PRIOR TO FABRICATION.
 - STEEL POST SIZES SHOWN ARE AASHTO M183. FOR STRUCTURE AND MOUNTING DETAILS, SEE WSDOT STANDARD DRAWINGS SERIES G.
 - FOR CLEARANCES, "W" IS DIMENSION FROM EDGE OF TRAVELED WAY TO CENTER OF SIGN POST.
 - SIGN POSTS SHALL BE BREAKAWAY AND "PRE-PUNCHED".



SIGN INSTALLATION DETAILS
NTS

SIGNING AND STRIPING DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



DESIGNED:
B.J./BMK/ASV
CHECKED:
DAH
MAY 2024
71486.000

SHEET ID
SS03

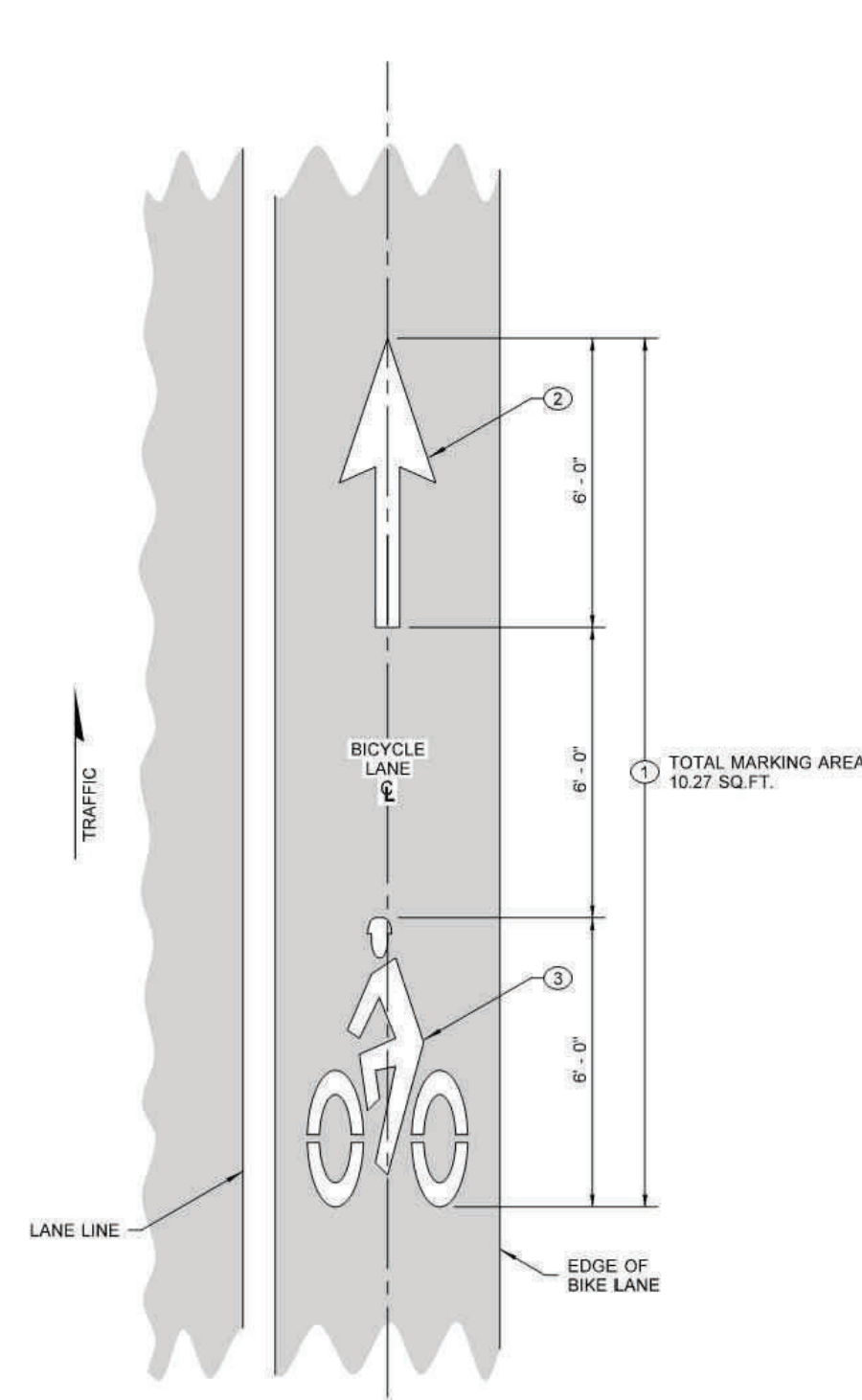
SHEET **42** OF **50**

FINAL PLANS

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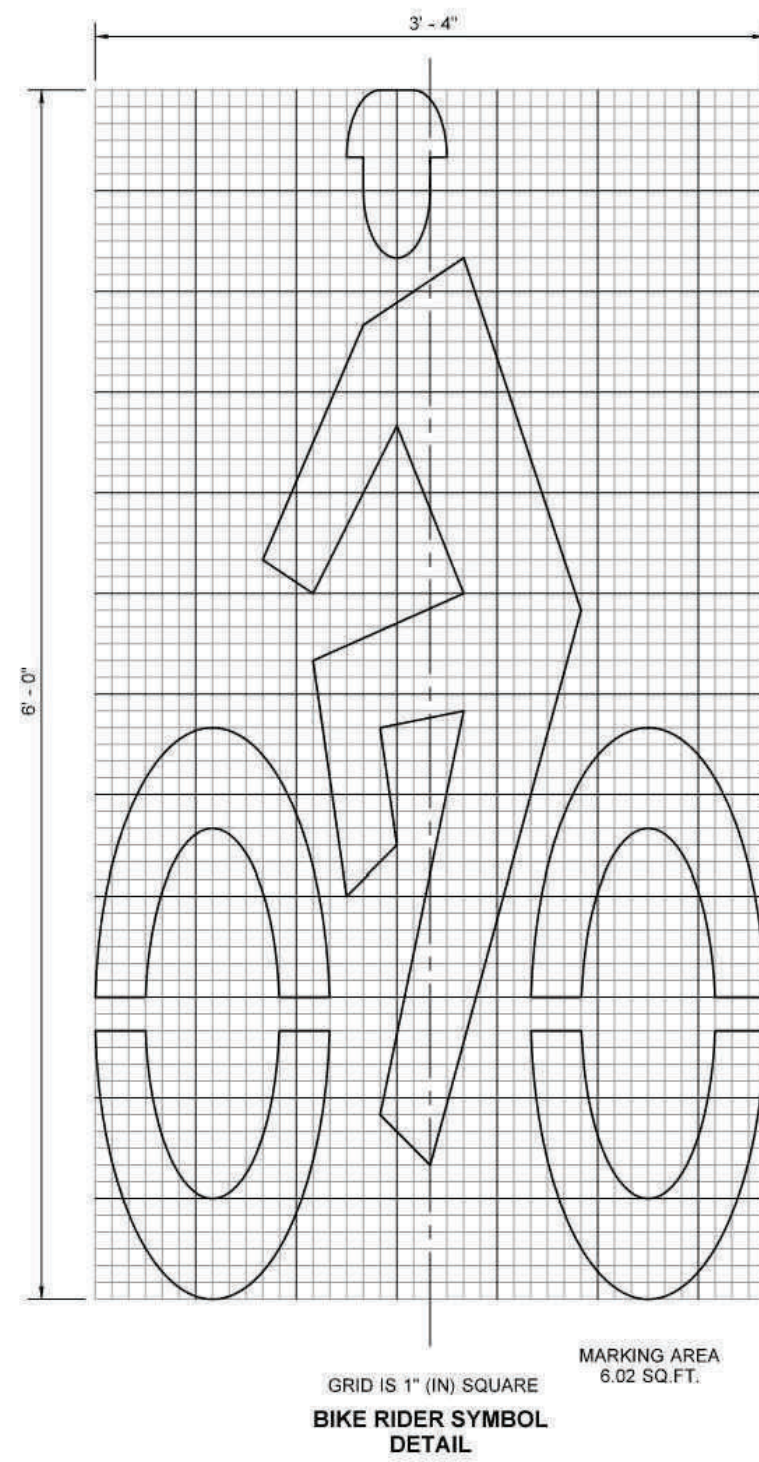
DRAWN BY: MARK SUJKA



BICYCLE LANE SYMBOL LAYOUT

KEY NOTES

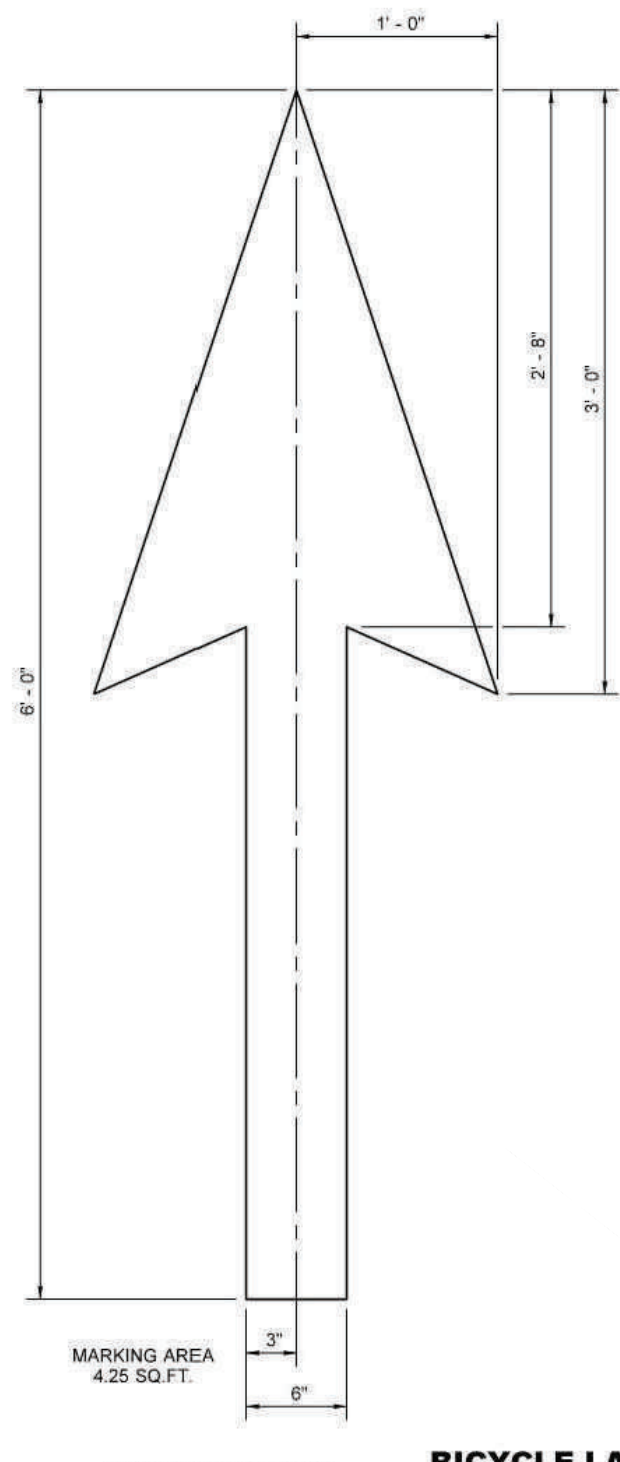
- ① Bid Item "Bicycle Lane Symbol" includes Bike Lane Arrow and Bike Rider Symbol.
- ② 2' (ft) x 6' (ft) White Bike Lane Arrow.
- ③ Bike Rider Symbol.



BIKE RIDER SYMBOL DETAIL

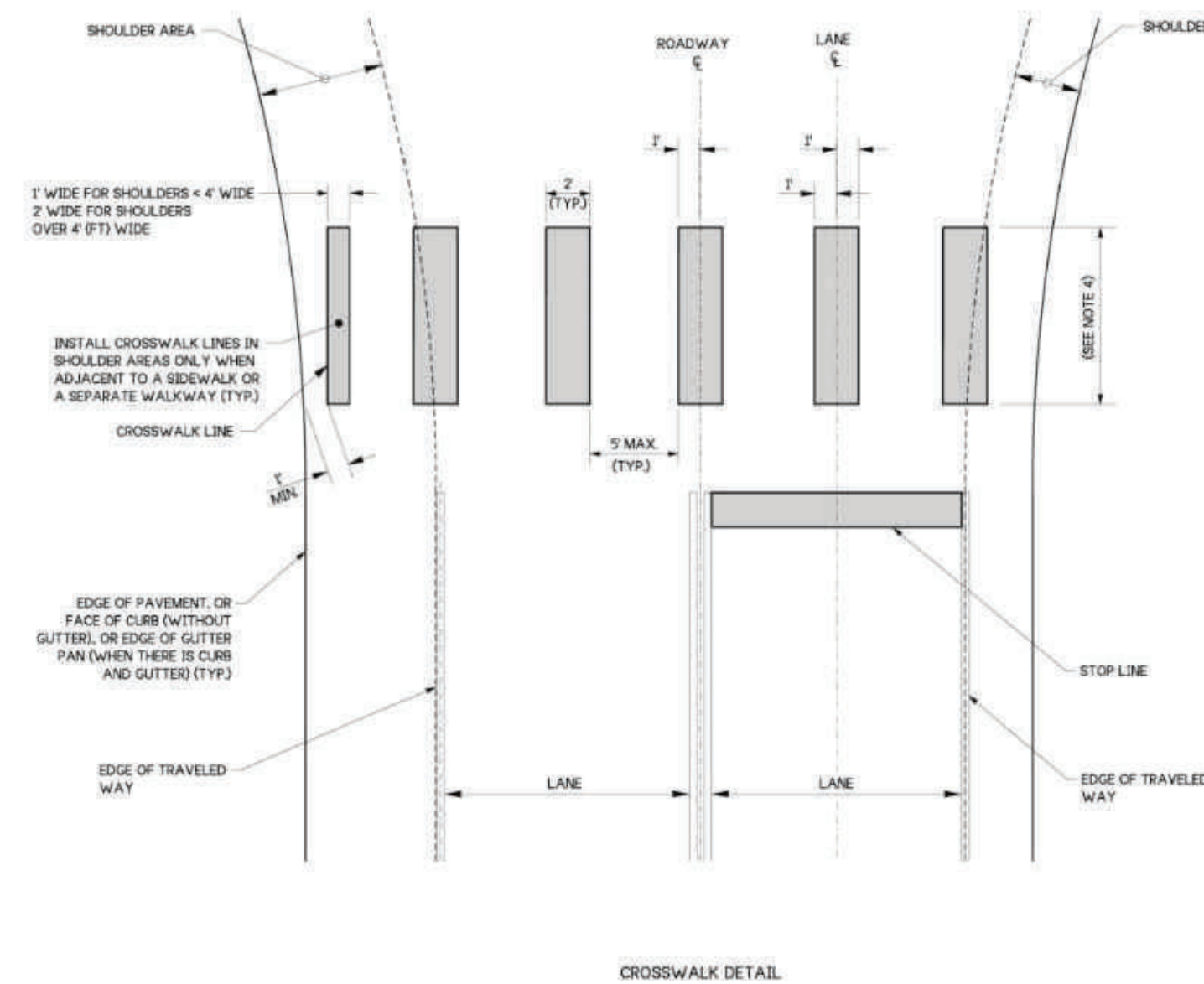
GENERAL NOTE

See Contract for location and material requirements.



BIKE LANE ARROW DETAIL

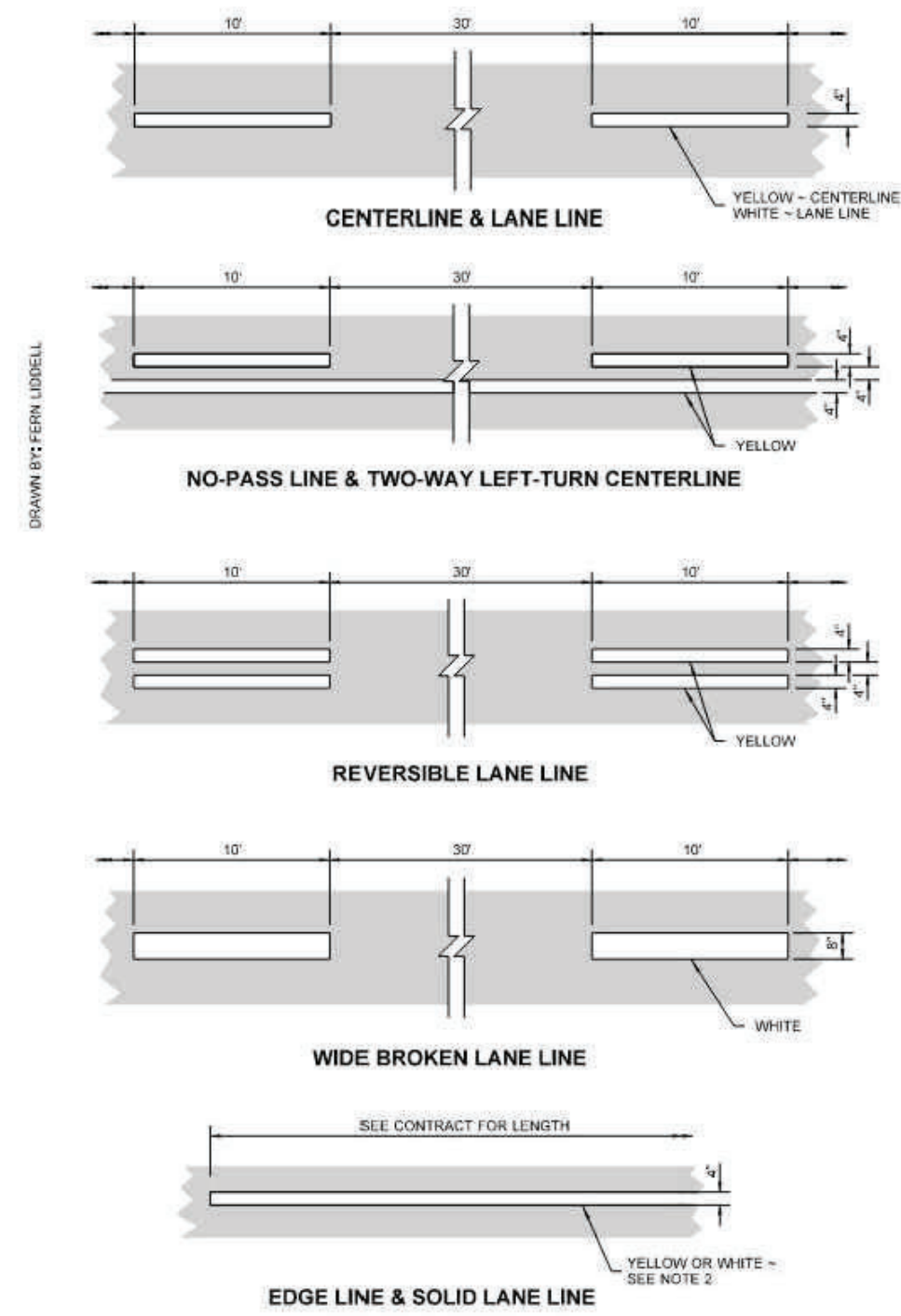
BICYCLE LANE SYMBOL LAYOUT



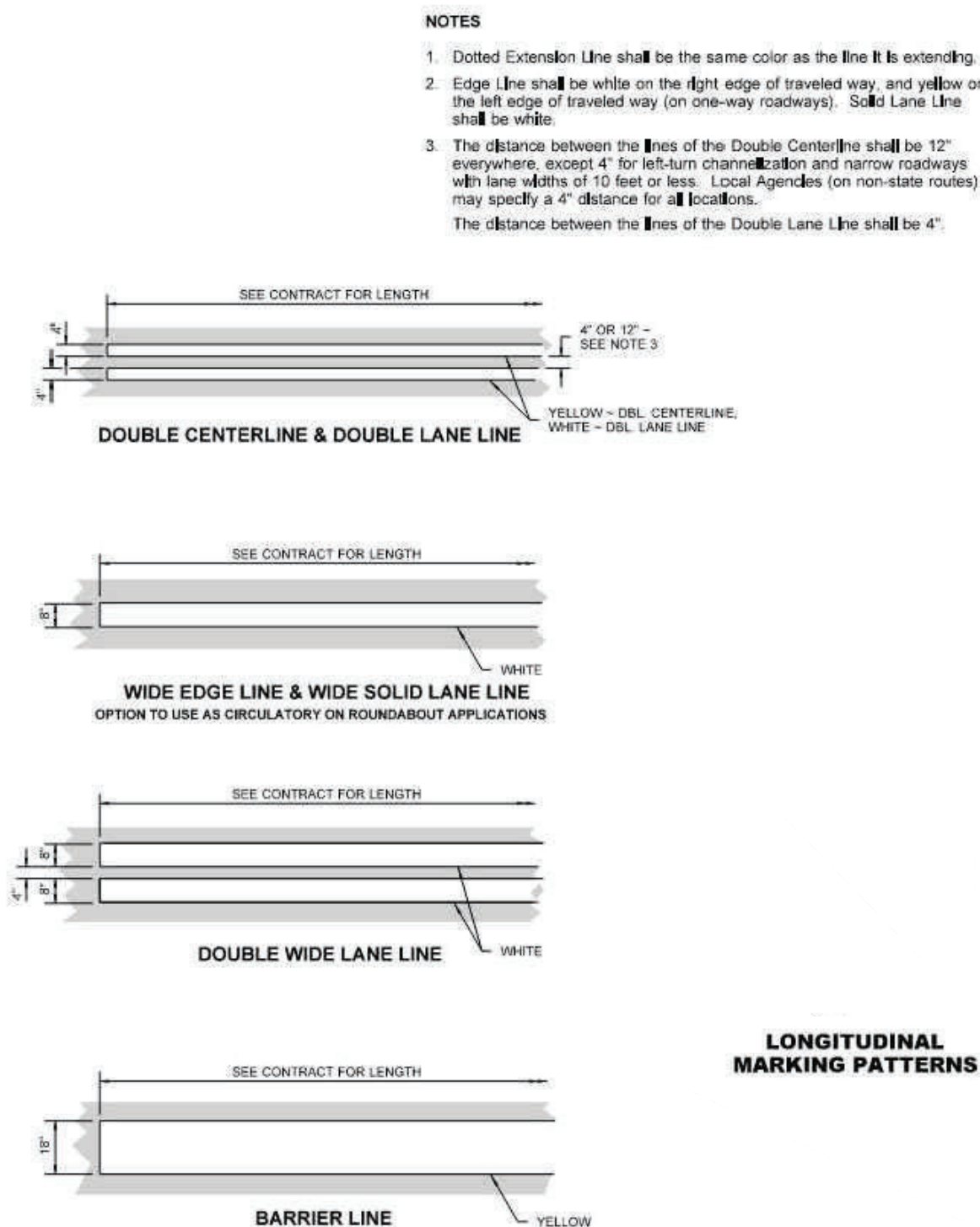
NOTES:

- 1. See Contract Plans for crosswalk locations.
- 2. To the maximum extent possible, curb ramp centerline should be perpendicular to the crosswalk centerline.
- 3. To the maximum extent possible, crosswalks should be perpendicular to the traveled way centerline.
- 4. See Contract plans for crosswalk width.
- 5. To maximum extent possible, place crosswalk bars out of the wheel paths.

CROSSWALK LAYOUT



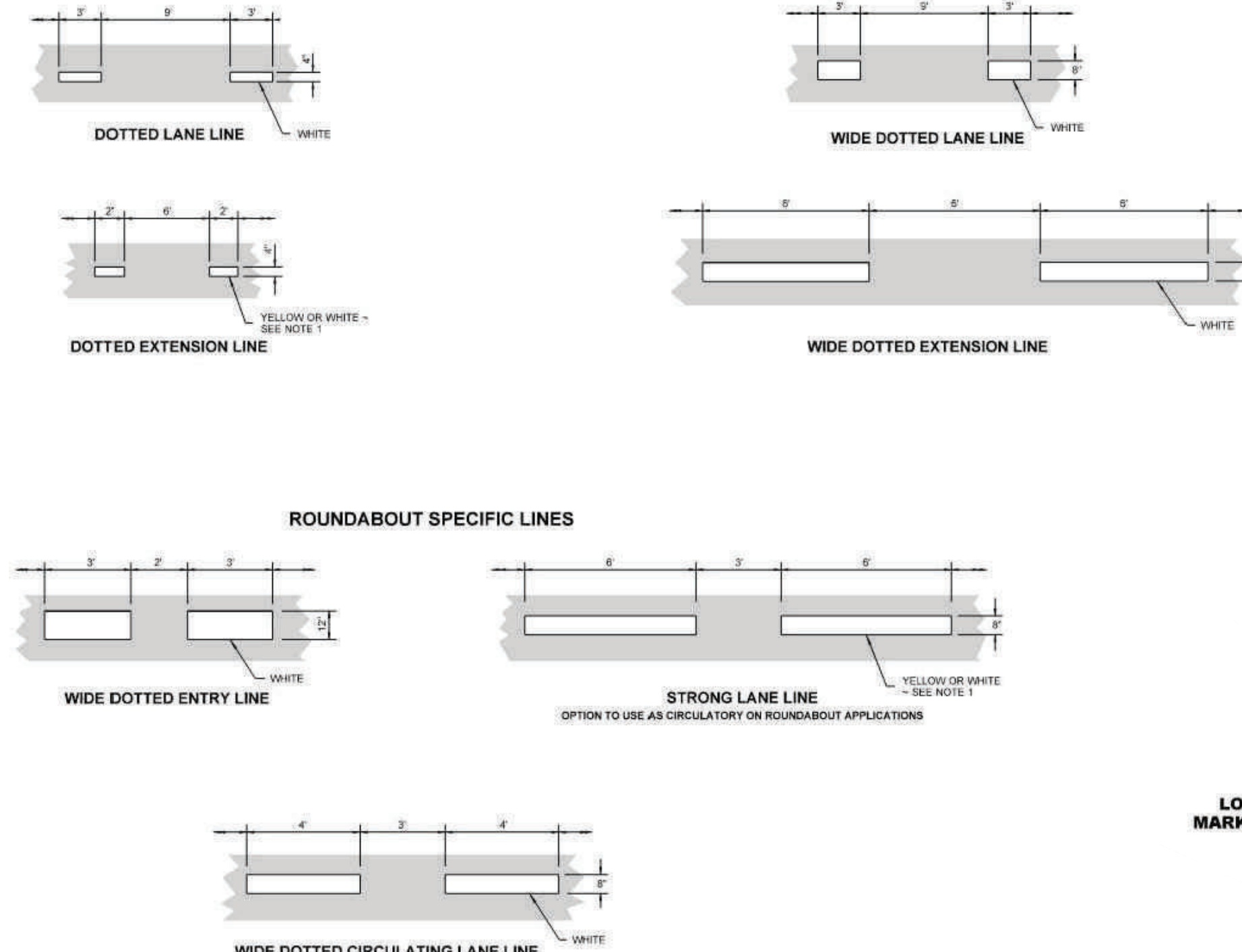
EDGE LINE & SOLID LANE LINE



NOTES

- 1. Dotted Extension Line shall be the same color as the line it is extending.
- 2. Edge Line shall be white on the right edge of traveled way, and yellow on the left edge of traveled way (on one-way roadways). Solid Lane Line shall be white.
- 3. The distance between the lines of the Double Centerline shall be 12" everywhere, except 4' for left-turn channels and narrow roadways with lane widths of 10 feet or less. Local Agencies (on non-state routes) may specify a 4' distance for all locations. The distance between the lines of the Double Lane Line shall be 4'.

LONGITUDINAL MARKING PATTERNS



ROUNDABOUT SPECIFIC LINES

LONGITUDINAL MARKING PATTERNS

**SIGNING AND STRIPING WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON**



Know what's below.
Call before you dig.



DESIGNED:
BJ/BMK/ASW
CHECKED:
DAH
MAY 2024
71486.000

SHEET ID
SS04

SHEET **43** OF **50**

FINAL PLANS

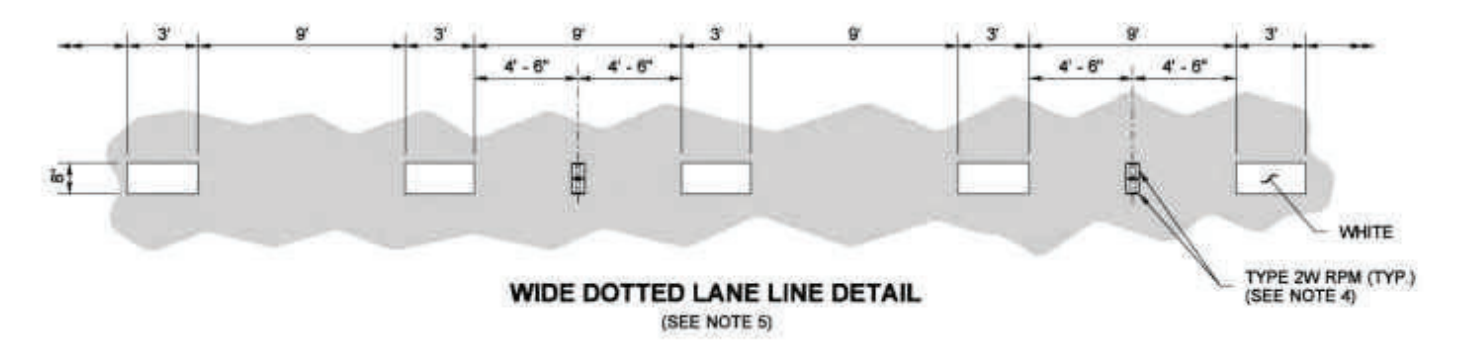
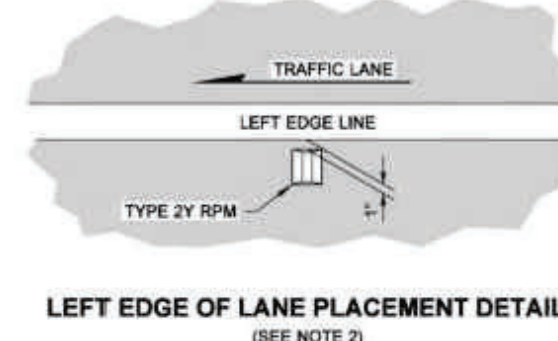
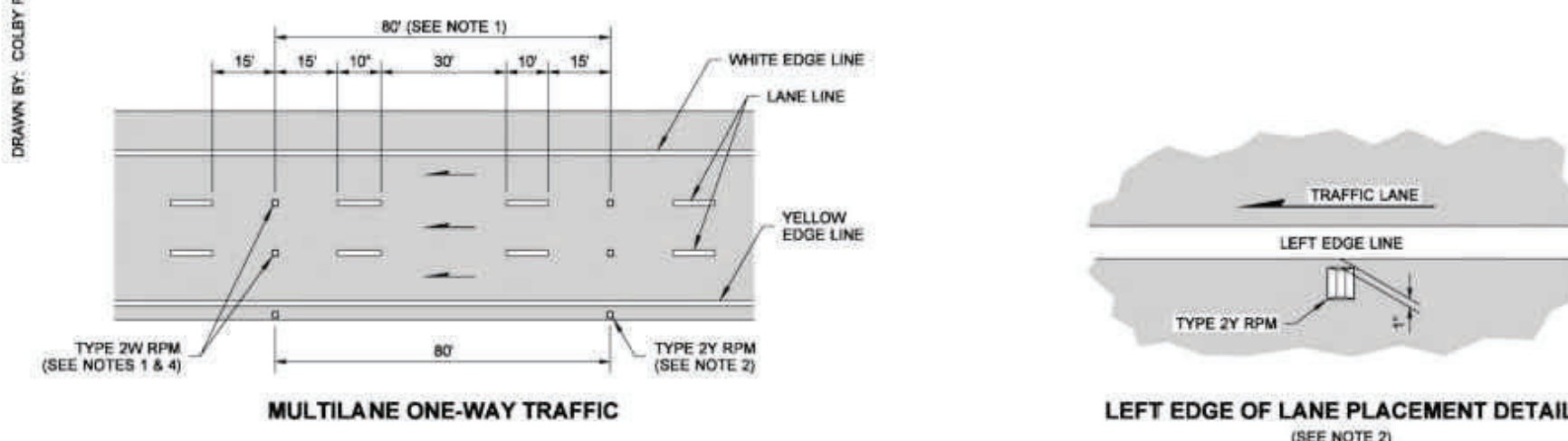
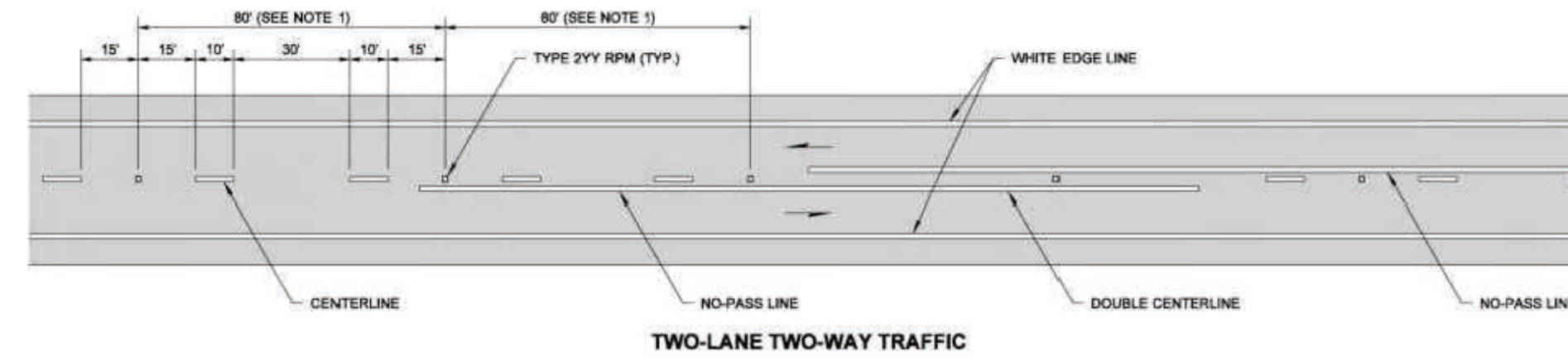
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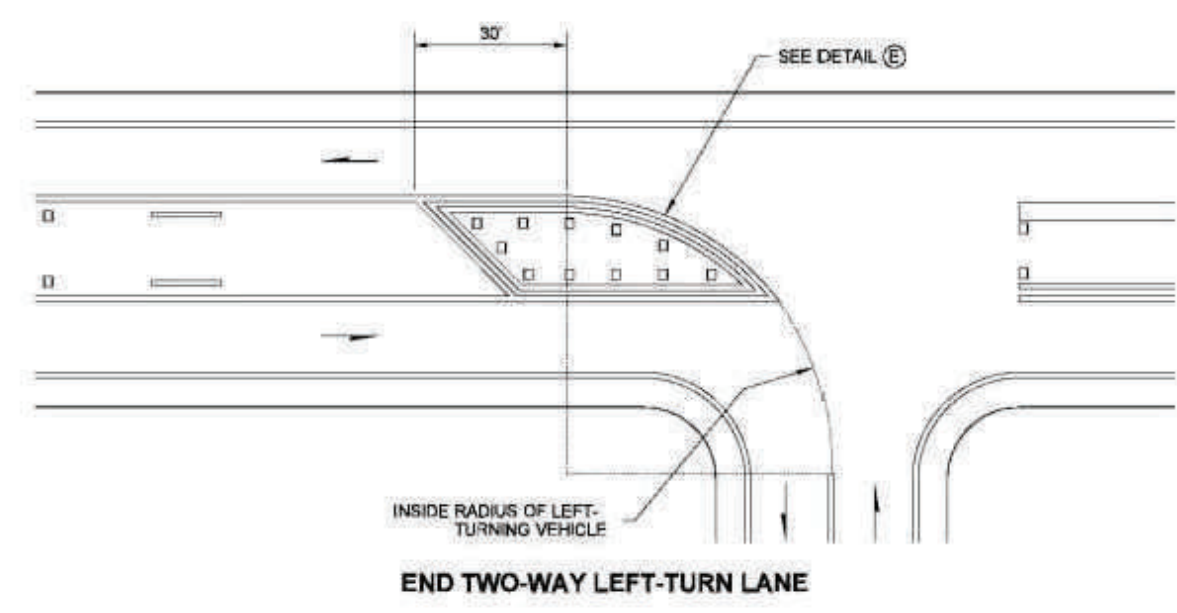
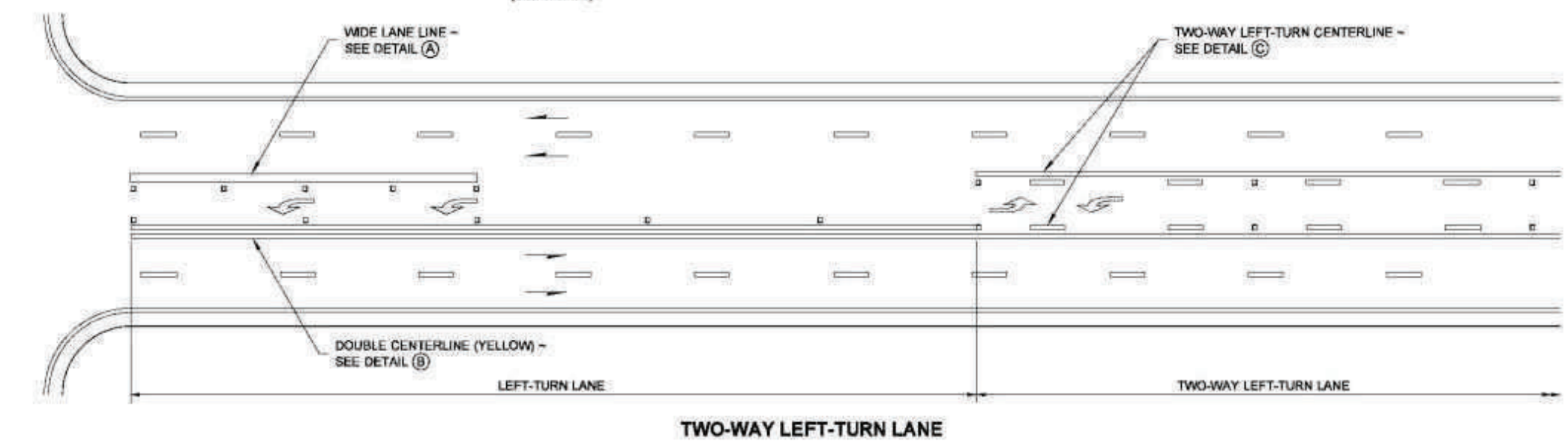
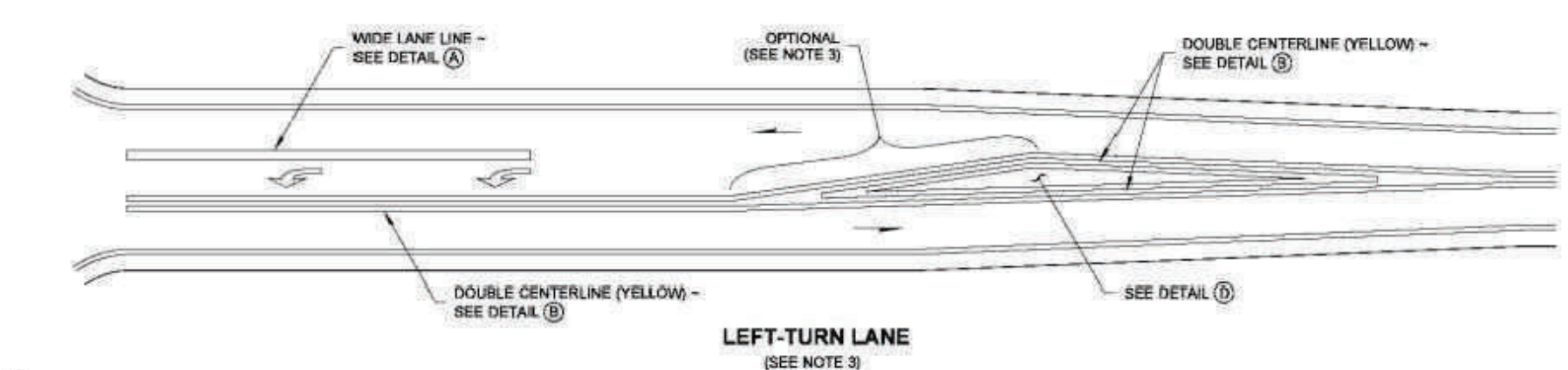
DRAWN BY: LISA OYFORD



- NOTES**
1. Raised Pavement Markers Types 2YY and 2W shall be spaced at 80' (ft) intervals on tangents and on horizontal curves with a radius of 1500' (ft) or more, and at 40' (ft) intervals on horizontal curves having radii of less than 1500' (ft). Center the RPMs in the gaps between the pavement marking lines.
 2. Type 2Y RPMs, when specified, shall be placed outside the left Edge Line at 80' (ft) intervals. See "LEFT EDGE OF LANE PLACEMENT DETAIL."
 3. Recessed pavement markers, when specified, shall be installed at the locations shown for Type 2W RPMs on multilane one-way roadways, and Type 2YY RPMs on two-lane two-way roadways.
 4. The Type 2W RPMs placed on multilane one-way roadways and all RPMs set in recesses shall have an abrasion-resistant coating.
 5. Do not recess side-to-side RPMs on Wide Dotted Lane Lines.

TYPE 2 RPM RAISED FACE COLORS	
TYPE 2YY	YELLOW AND YELLOW
TYPE 2W	WHITE - ONE SIDE ONLY
TYPE 2Y	YELLOW - ONE SIDE ONLY

LONGITUDINAL MARKING SUPPLEMENT WITH RAISED PAVEMENT MARKERS

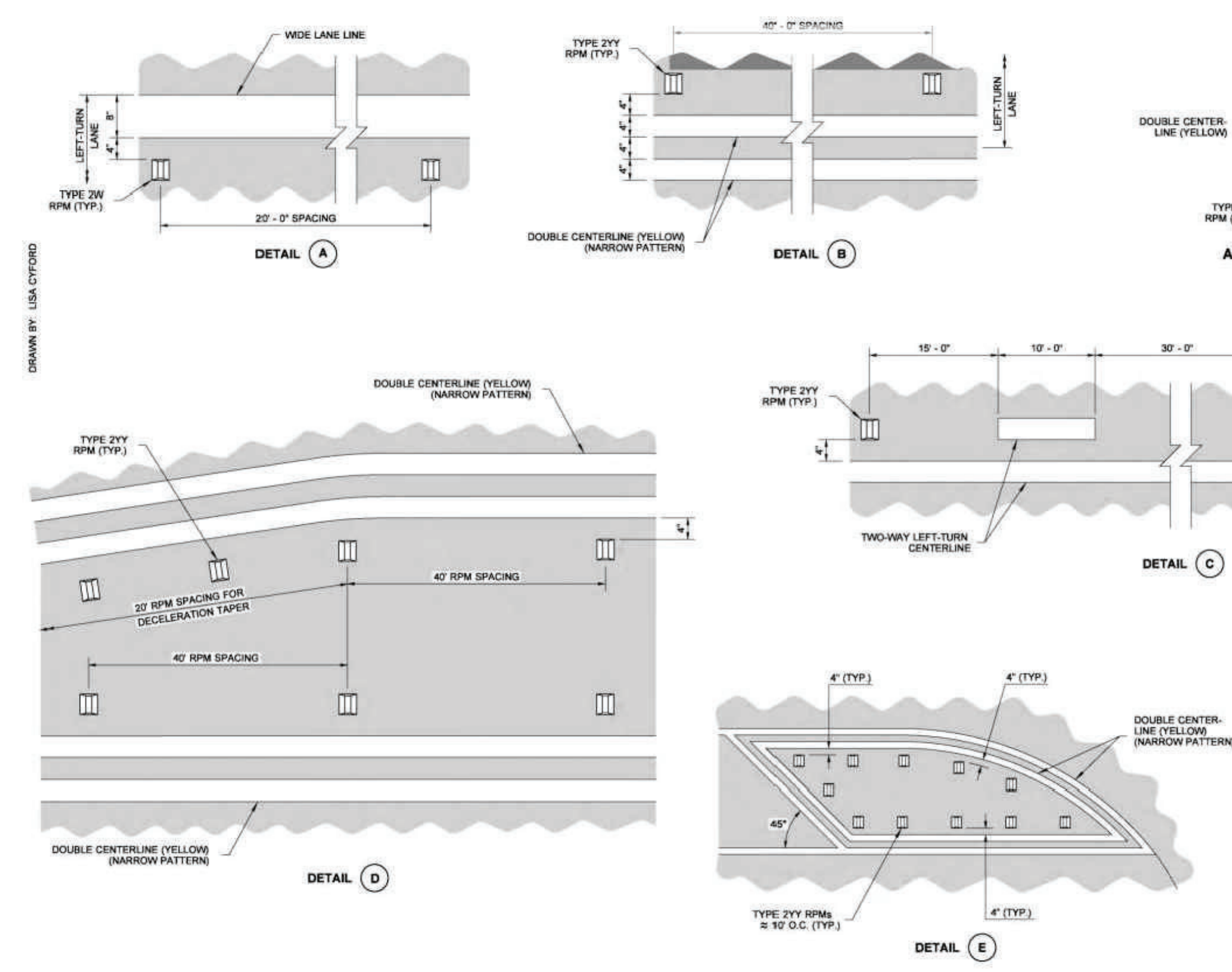


- NOTES**
1. Raised pavement markers shall be installed only when specified in the Contract Plans.
 2. See the Standard Plans for marker designation.
 3. The portion labeled "OPTIONAL" is used only when the Optional Marked Deceleration Taper (see Standard Plans M-3.10 and M-3.20) is specified in the Contract Plans.
- ↔ Type 2L (SL) Traffic Arrow

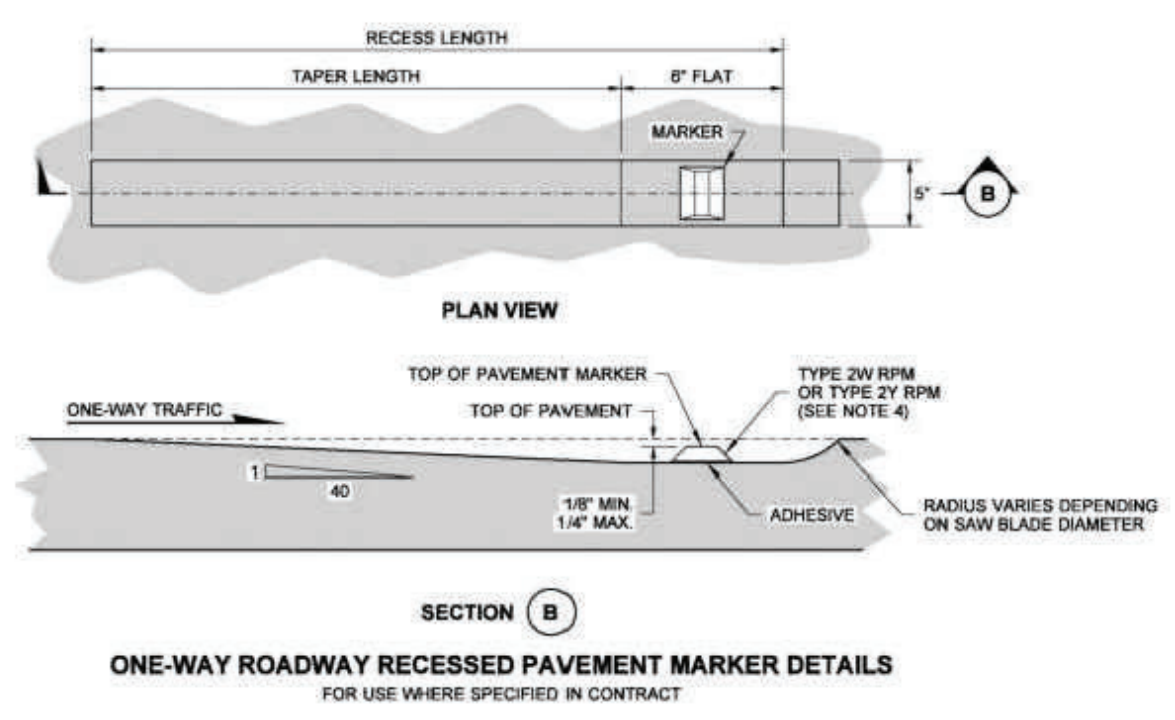
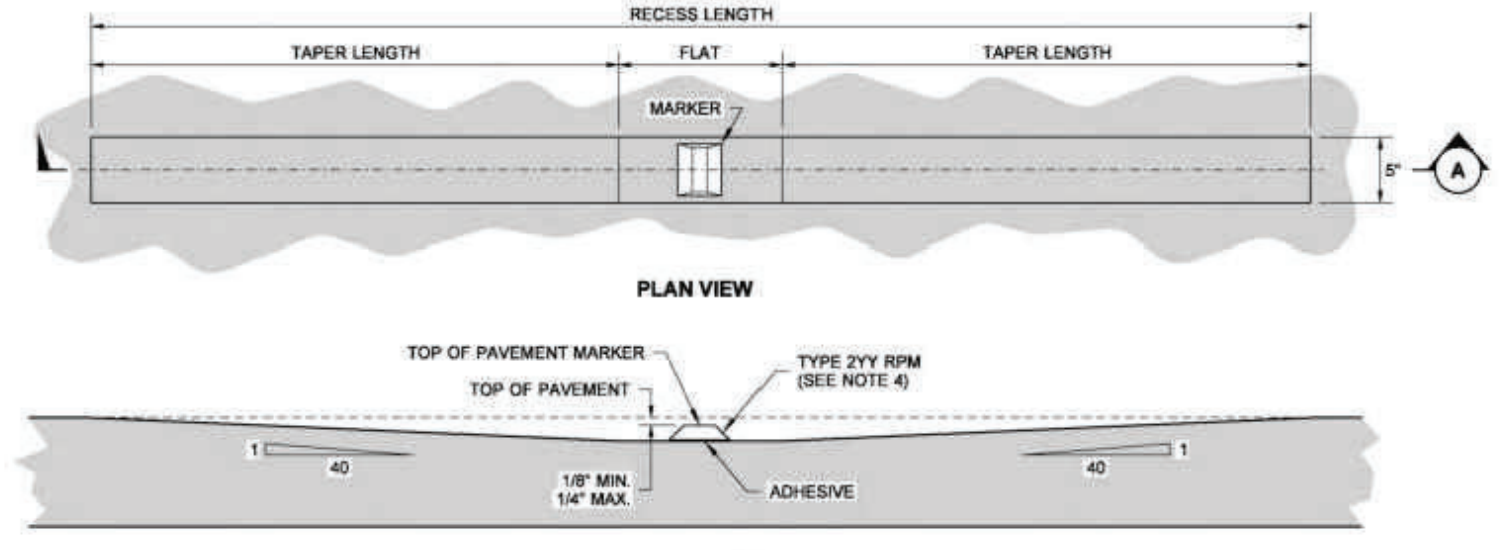
LONGITUDINAL MARKING SUPPLEMENT WITH RPMs - TURN LANES

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DRAWN BY: LISA OYFORD

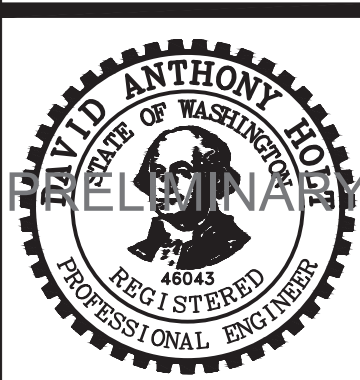


LONGITUDINAL MARKING SUPPLEMENT WITH RPMs - TURN LANES



LONGITUDINAL MARKING SUPPLEMENT WITH RAISED PAVEMENT MARKERS

SIGNING AND STRIPING WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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BJ/BMK/ASV

CHECKED:
DAH

MAY 2024
71486.000

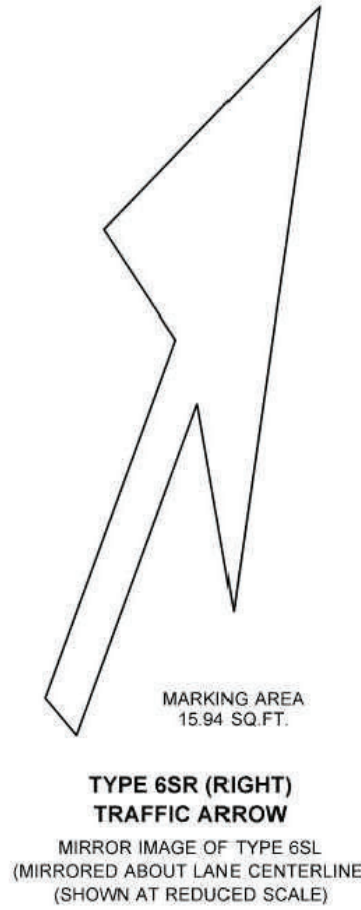
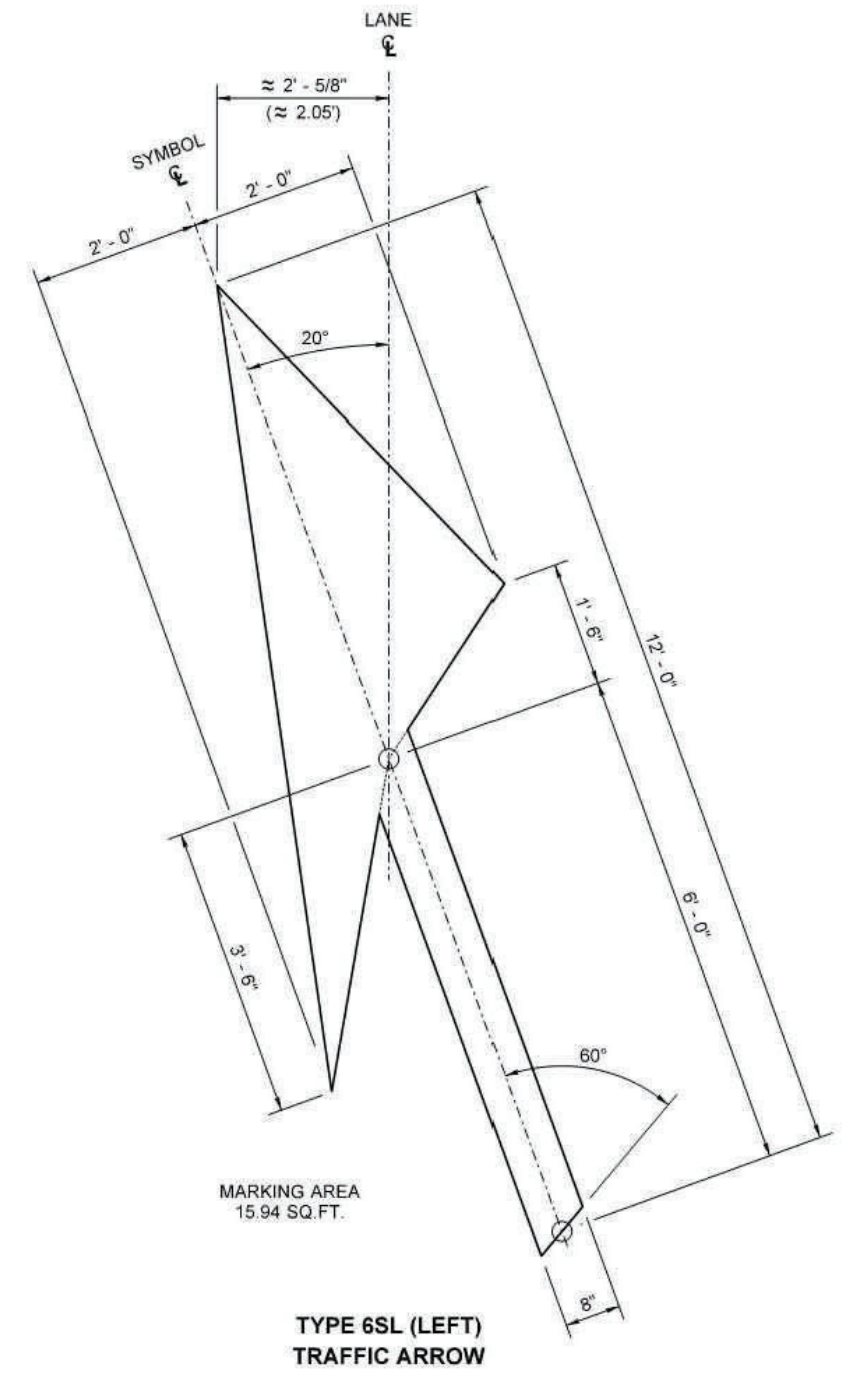
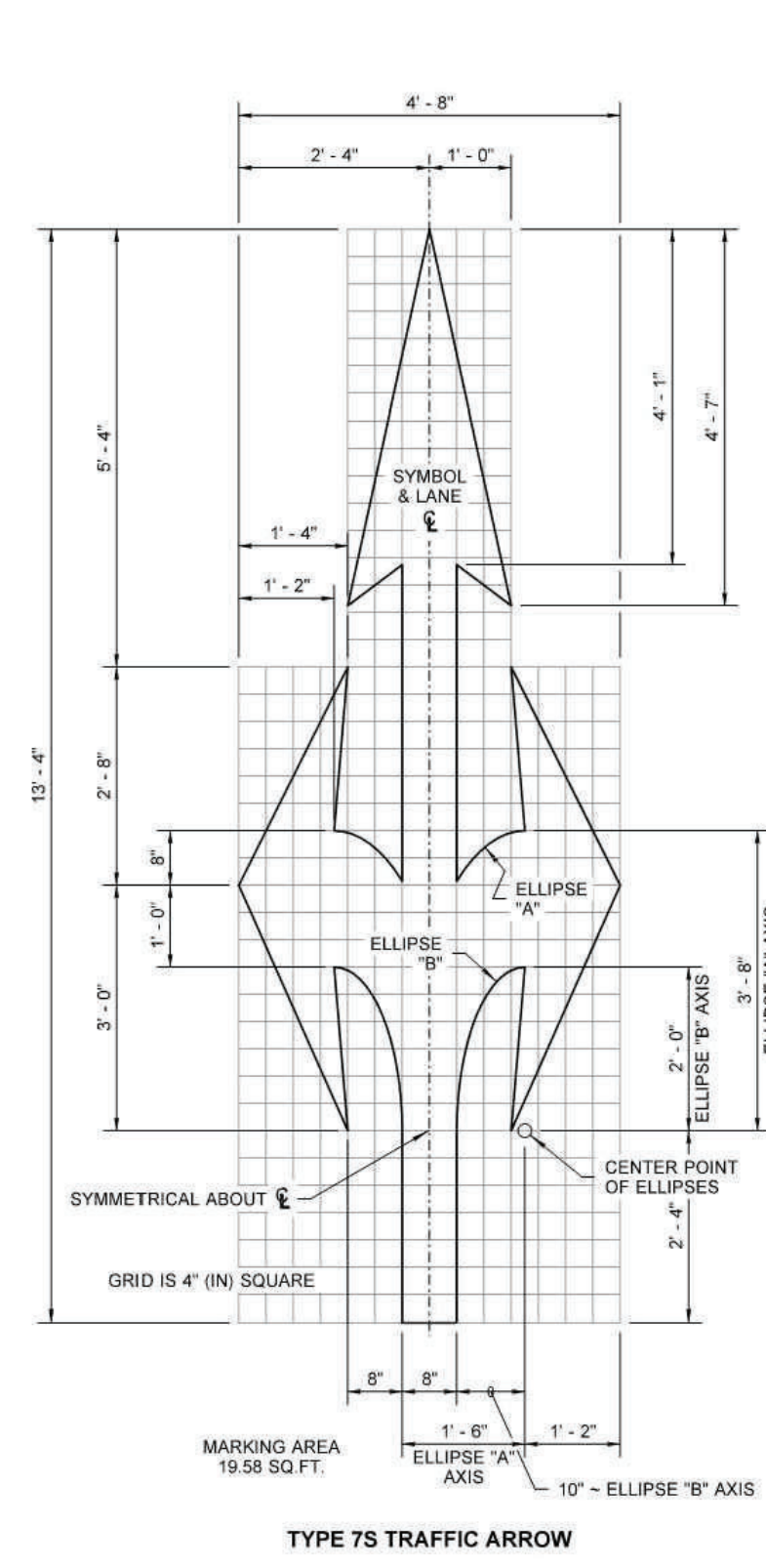
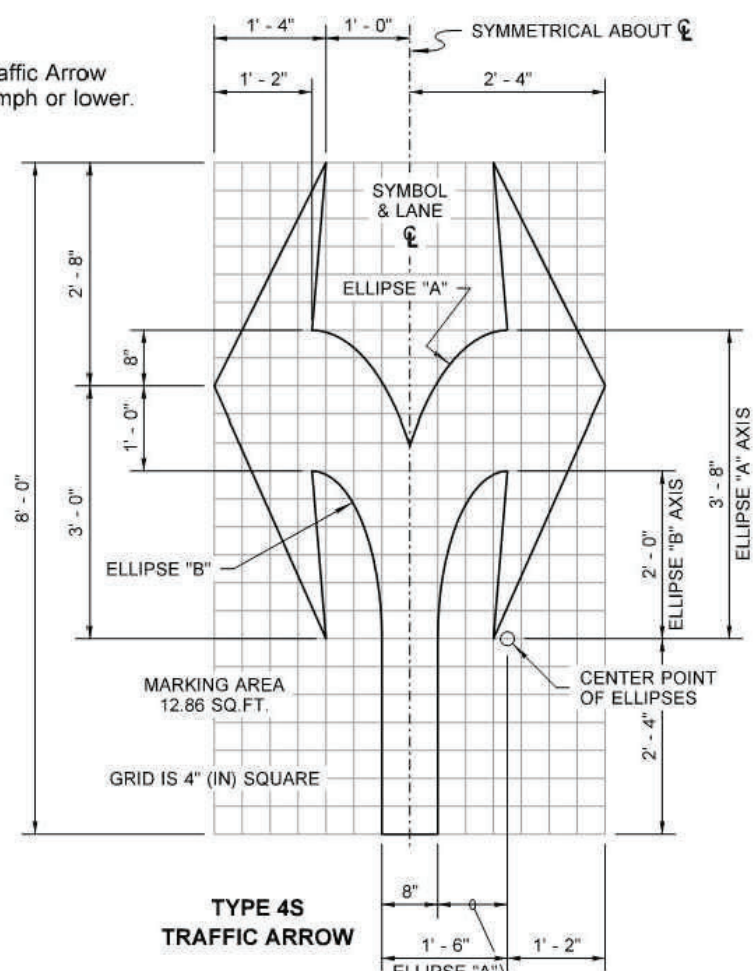
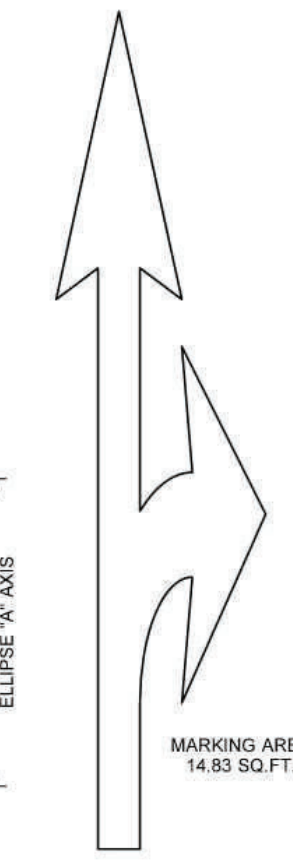
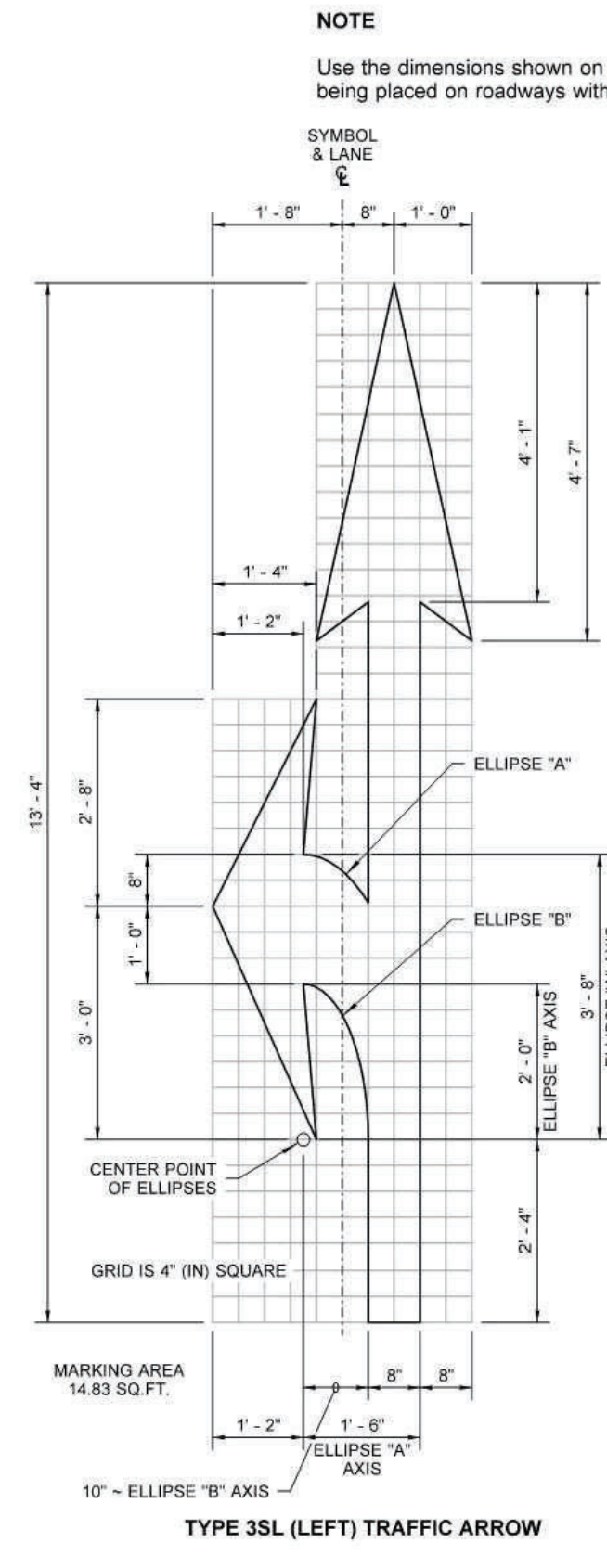
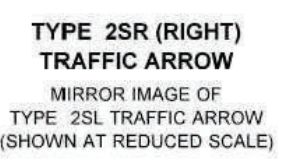
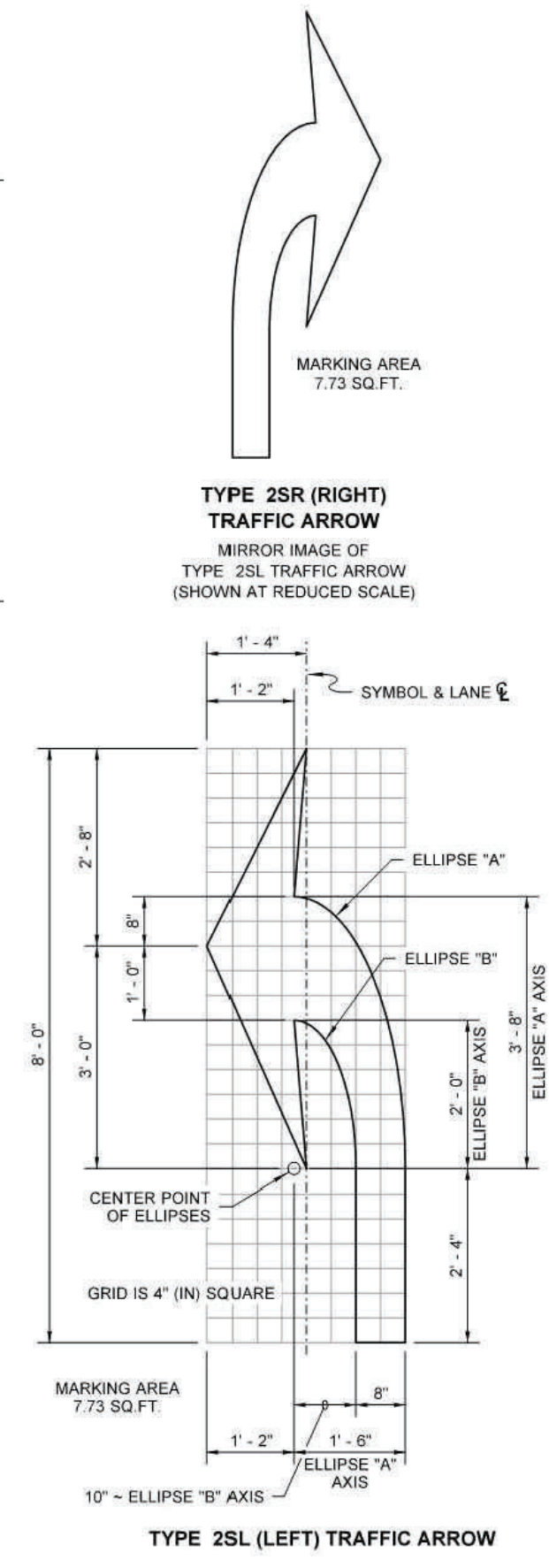
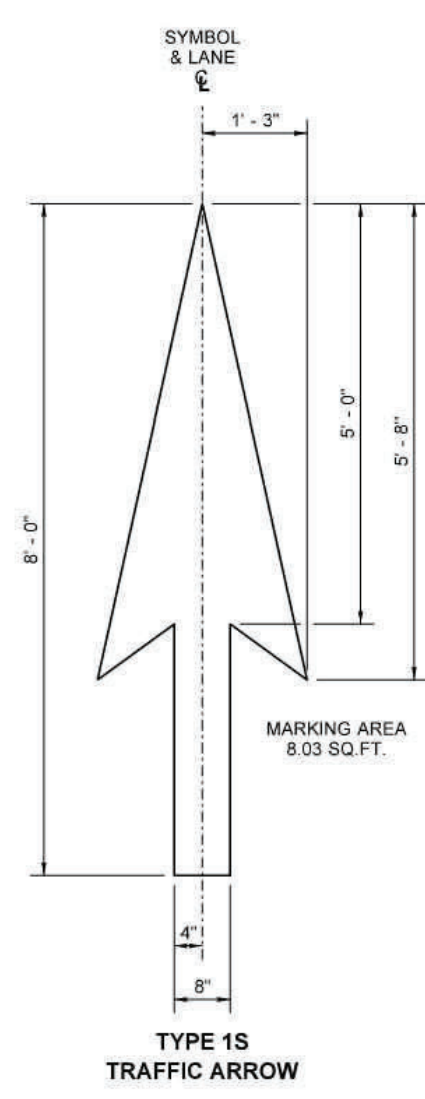
SHEET ID
SS05

SHEET **44** OF **50**

FINAL PLANS

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DRAWN BY: LISA CYFORD



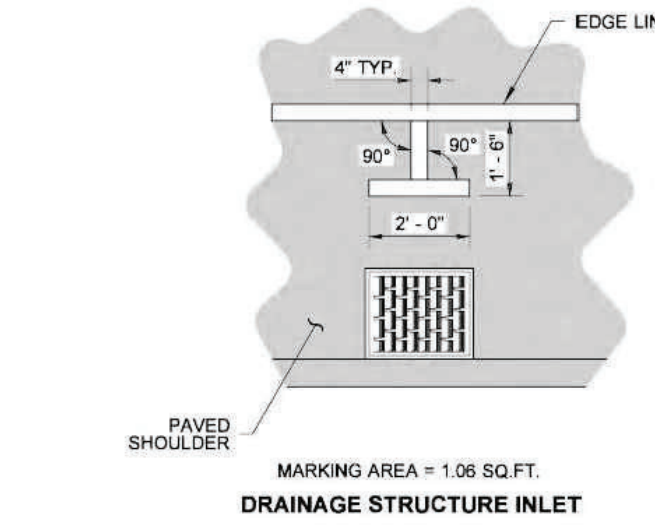
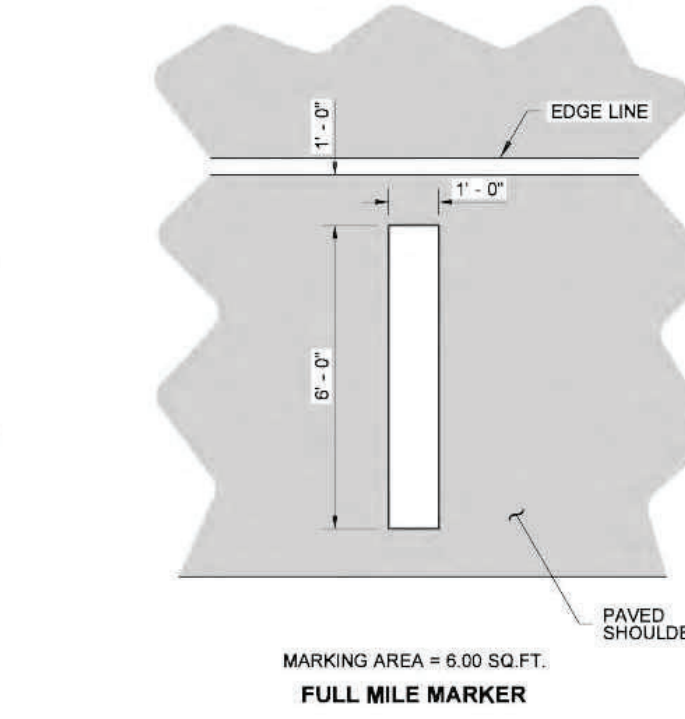
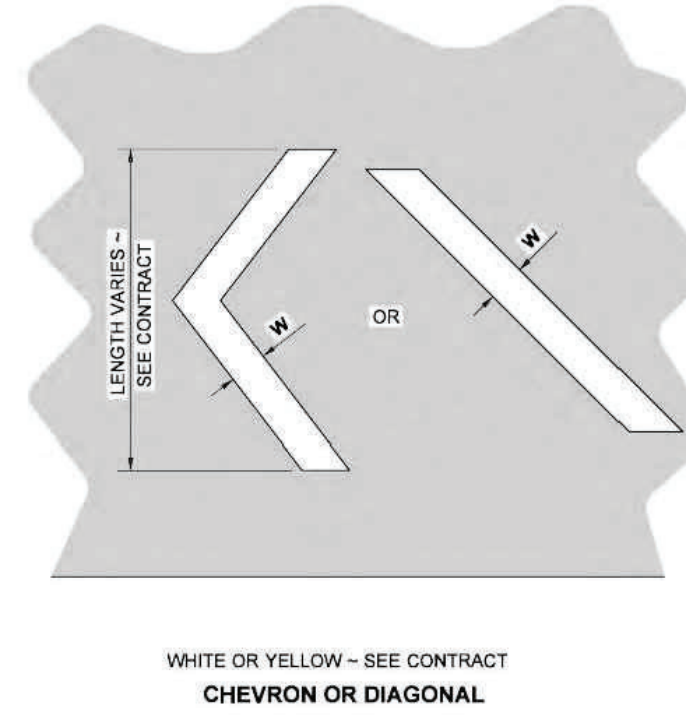
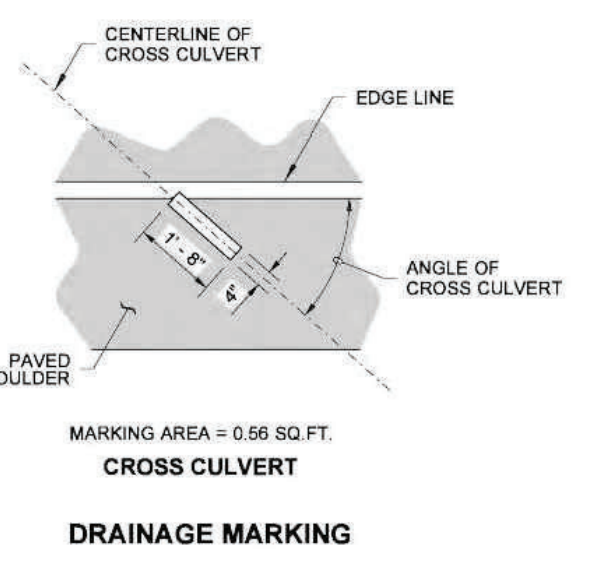
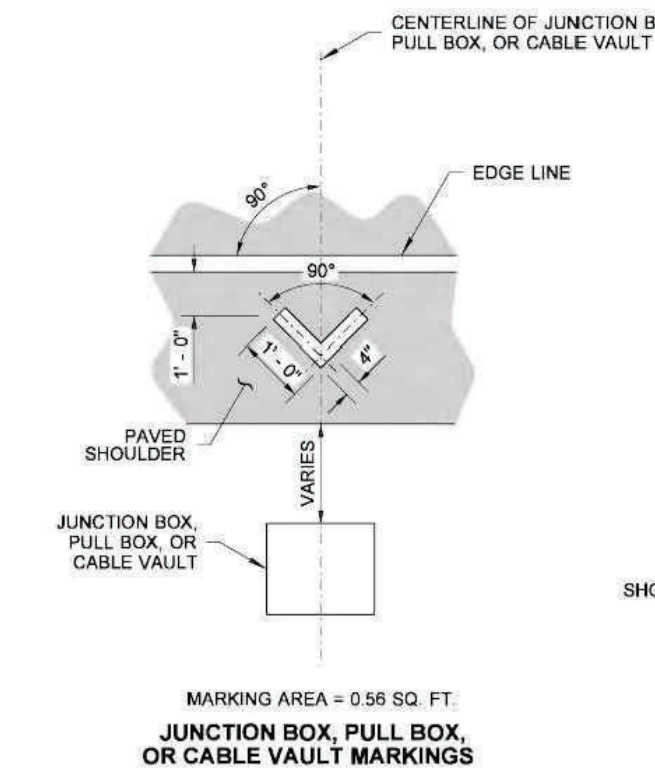
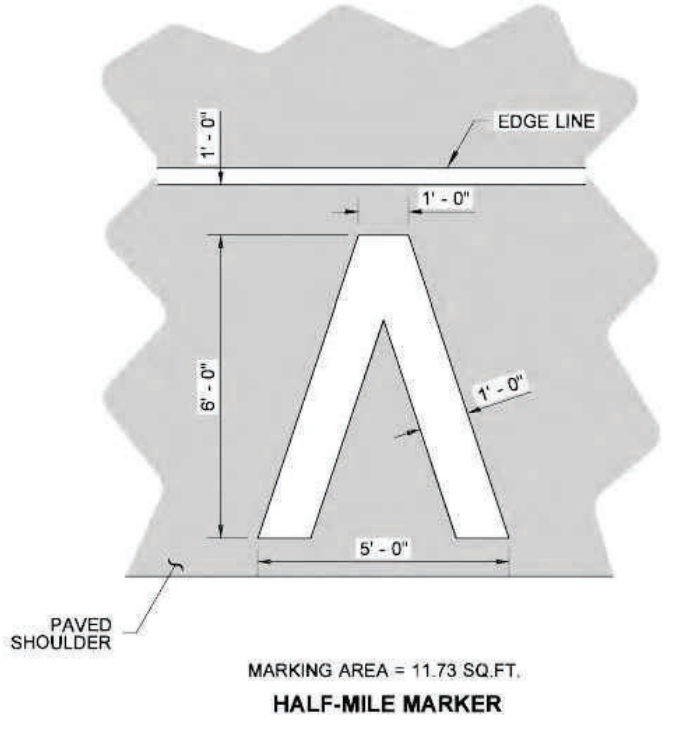
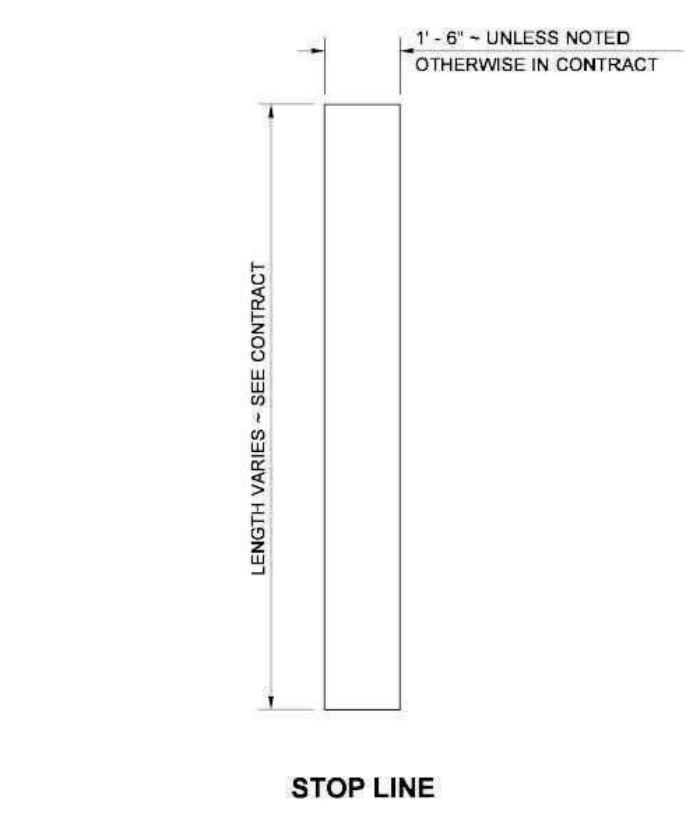
NOTE
Use the dimensions shown on this plan for each type of Traffic Arrow being placed on roadways with a posted speed limit of 40 mph or lower.

SYMBOL MARKINGS - TRAFFIC ARROWS FOR LOW-SPEED ROADWAYS

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NOTE
1. If Rumble Strips are present, install marking outside of the Rumble Strip.

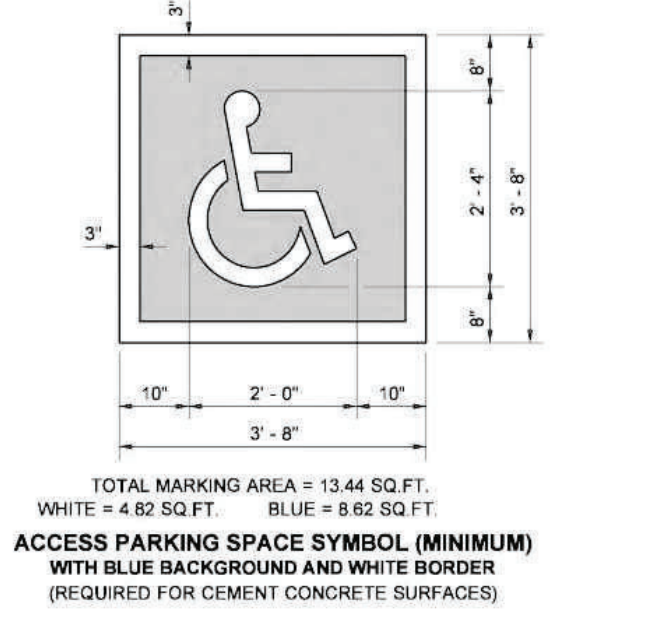
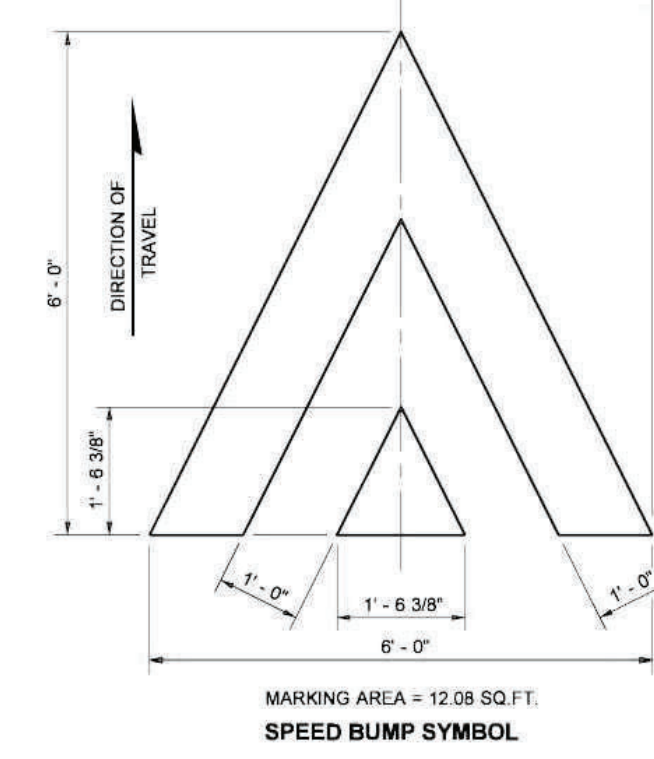
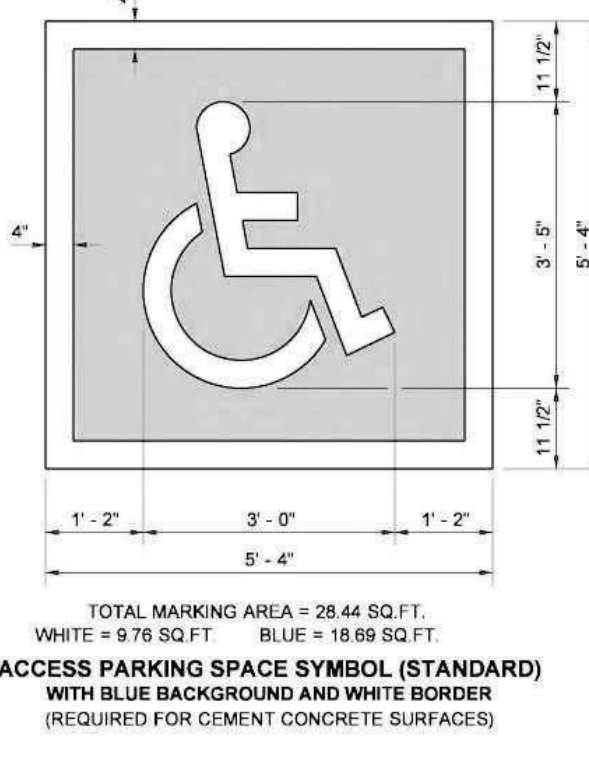
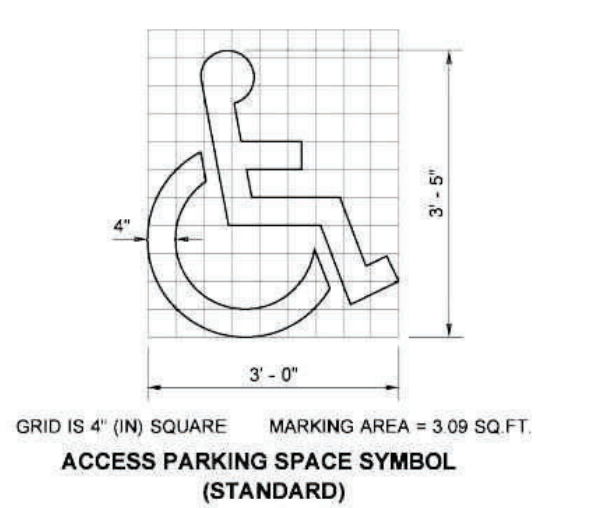


SYMBOL MARKINGS MISCELLANEOUS

CROSSHATCH MARKING
W = 8" (IN) FOR POSTED SPEED LIMIT OF 40 MPH OR LOWER
W = 12" (IN) FOR POSTED SPEED LIMIT OF 45 MPH OR HIGHER

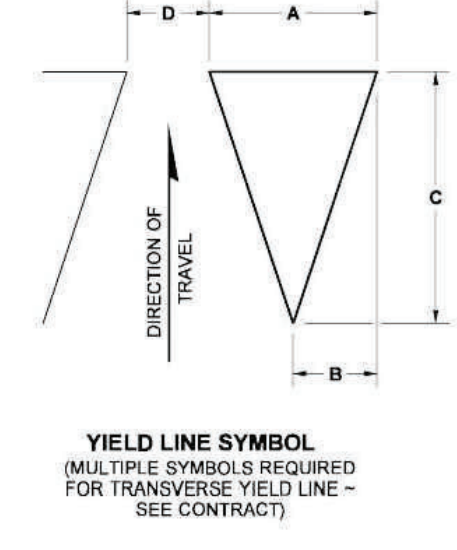
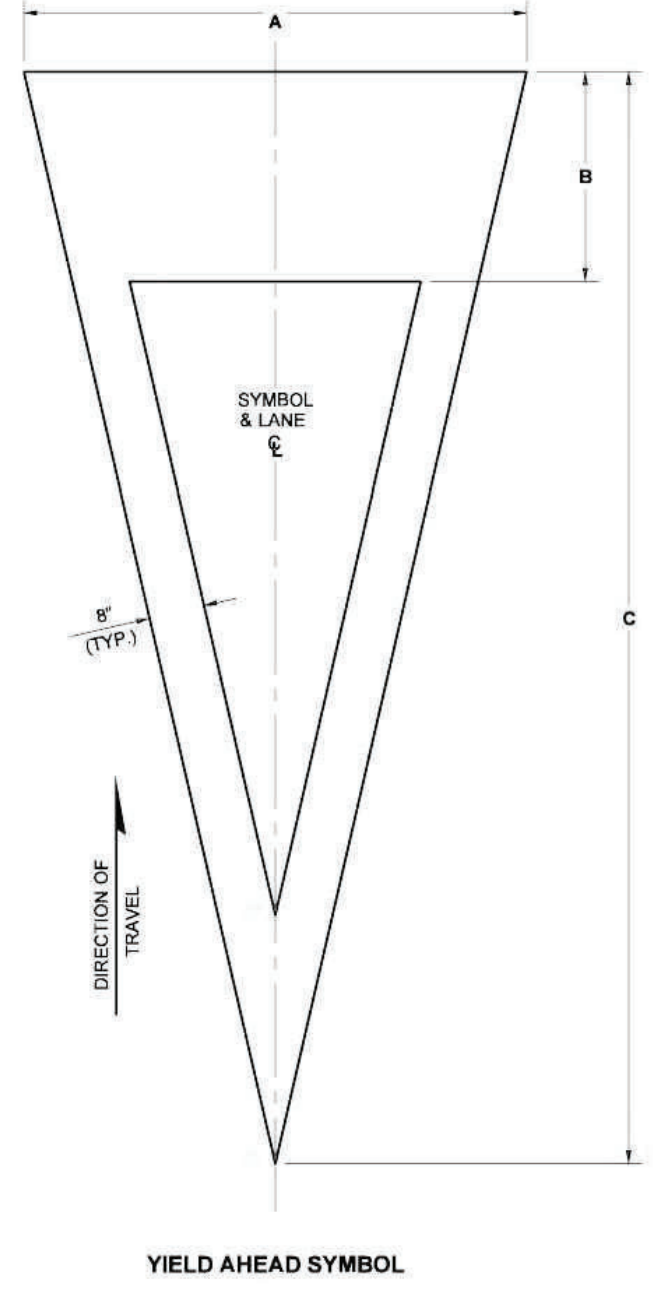
AERIAL SURVEILLANCE MARKERS

DRAINAGE MARKING



SYMBOL MARKING	A	B	C	D	USE	MARKING AREA	
YIELD AHEAD SYMBOL	TYPE 1	6'-0"	2'-6"	13'-0"	N/A	LESS THAN 45 MPH	25.90 SQ. FT.
	TYPE 2	6'-0"	3'-0"	20'-0"	N/A	45 MPH OR GREATER	36.54 SQ. FT.
YIELD LINE SYMBOL	TYPE 1	1'-0"	6"	1'-6"	6"	LESS THAN 45 MPH	0.75 SQ. FT.
	TYPE 2	2'-0"	1'-0"	3'-0"	1'-0"	45 MPH OR GREATER	3.00 SQ. FT.
	TYPE 2	2'-0"	1'-0"	3'-0"	1'-0"	ROUNDABOUT ENTRY *	3.00 SQ. FT.

* MINIMUM OF 4 IN LANE



SYMBOL MARKINGS MISCELLANEOUS

**SIGNING AND STRIPING WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON**

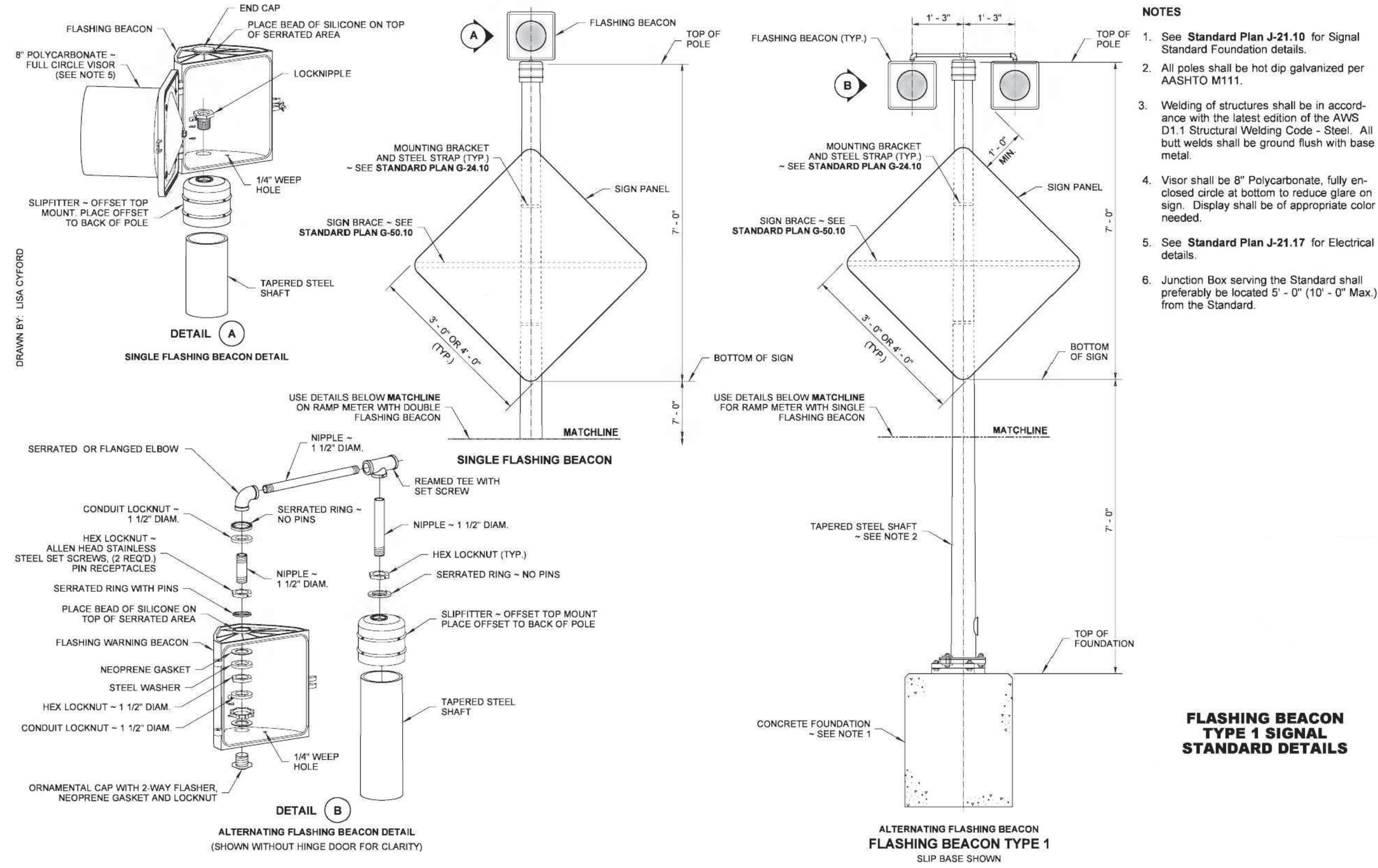


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CHECKED: DAH
MAY 2024
71486.000

SHEET ID
SS06
SHEET 45 OF 50

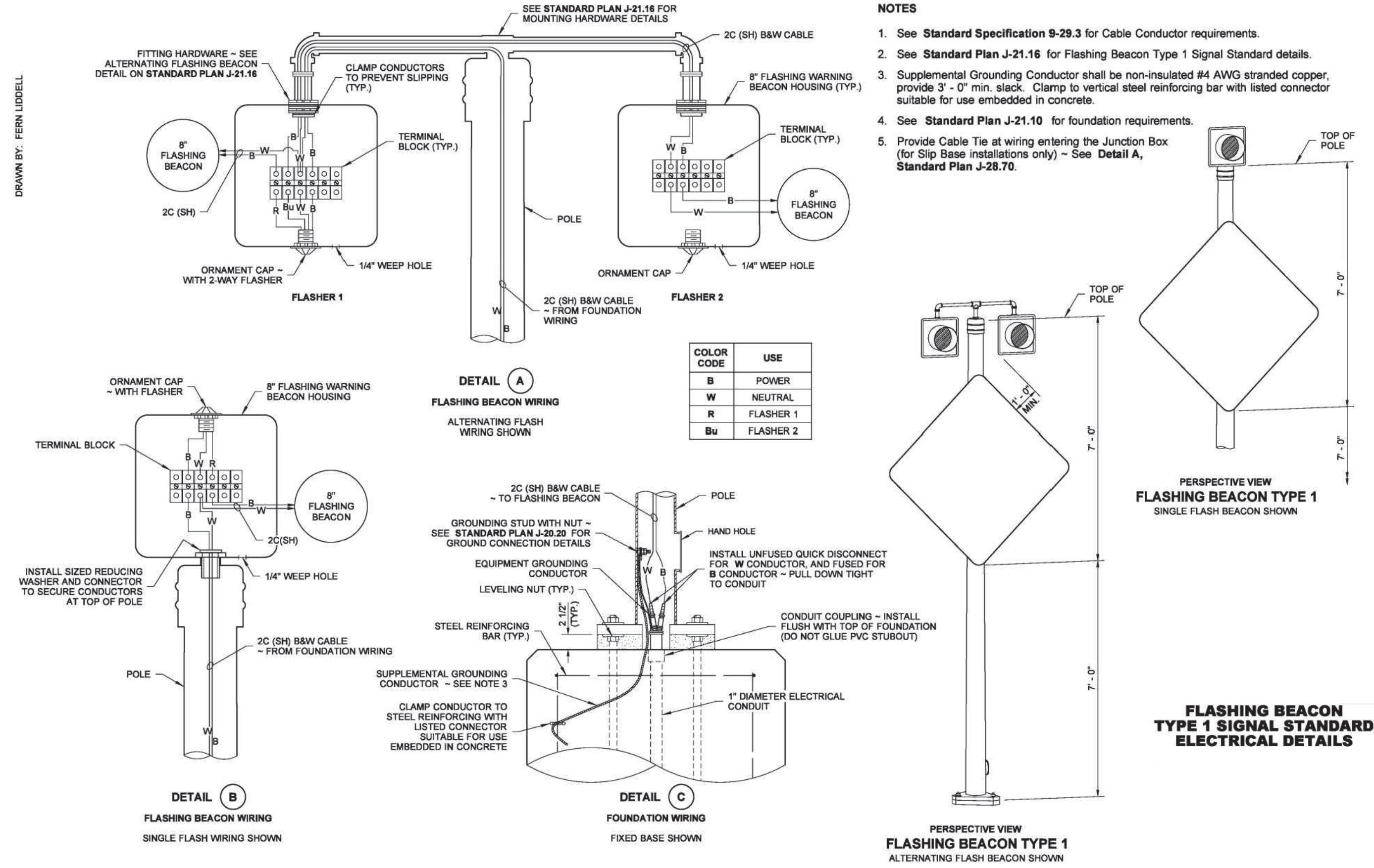
FINAL PLANS





- NOTES**
- See **Standard Plan J-21.10** for Signal Standard Foundation details.
 - All poles shall be hot dip galvanized per AASHTO M111.
 - Welding of structures shall be in accordance with the latest edition of the AWS D1.1 Structural Welding Code - Steel. All butt welds shall be ground flush with base metal.
 - Visor shall be 8" Polycarbonate, fully enclosed circle at bottom to reduce glare on sign. Display shall be of appropriate color needed.
 - See **Standard Plan J-21.17** for Electrical details.
 - Junction Box serving the Standard shall preferably be located 5' - 0" (10' - 0" Max) from the Standard.

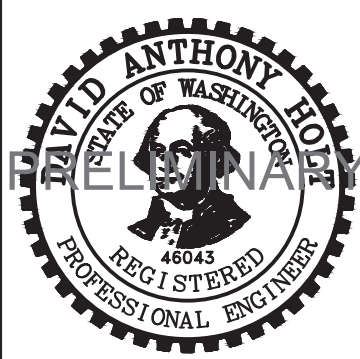
FLASHING BEACON TYPE 1 SIGNAL STANDARD DETAILS



- NOTES**
- See **Standard Specification 9-29.3** for Cable Conductor requirements.
 - See **Standard Plan J-21.16** for Flashing Beacon Type 1 Signal Standard details.
 - Supplemental Grounding Conductor shall be non-insulated #4 AWG stranded copper, provide 3' - 0" min. slack. Clamp to vertical steel reinforcing bar with listed connector suitable for use embedded in concrete.
 - See **Standard Plan J-21.10** for foundation requirements.
 - Provide Cable Tie at wiring entering the Junction Box (for Slip Base installations only) - See **Detail A, Standard Plan J-28.70**.

FINAL PLANS

SIGNING AND STRIPING WSDOT DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



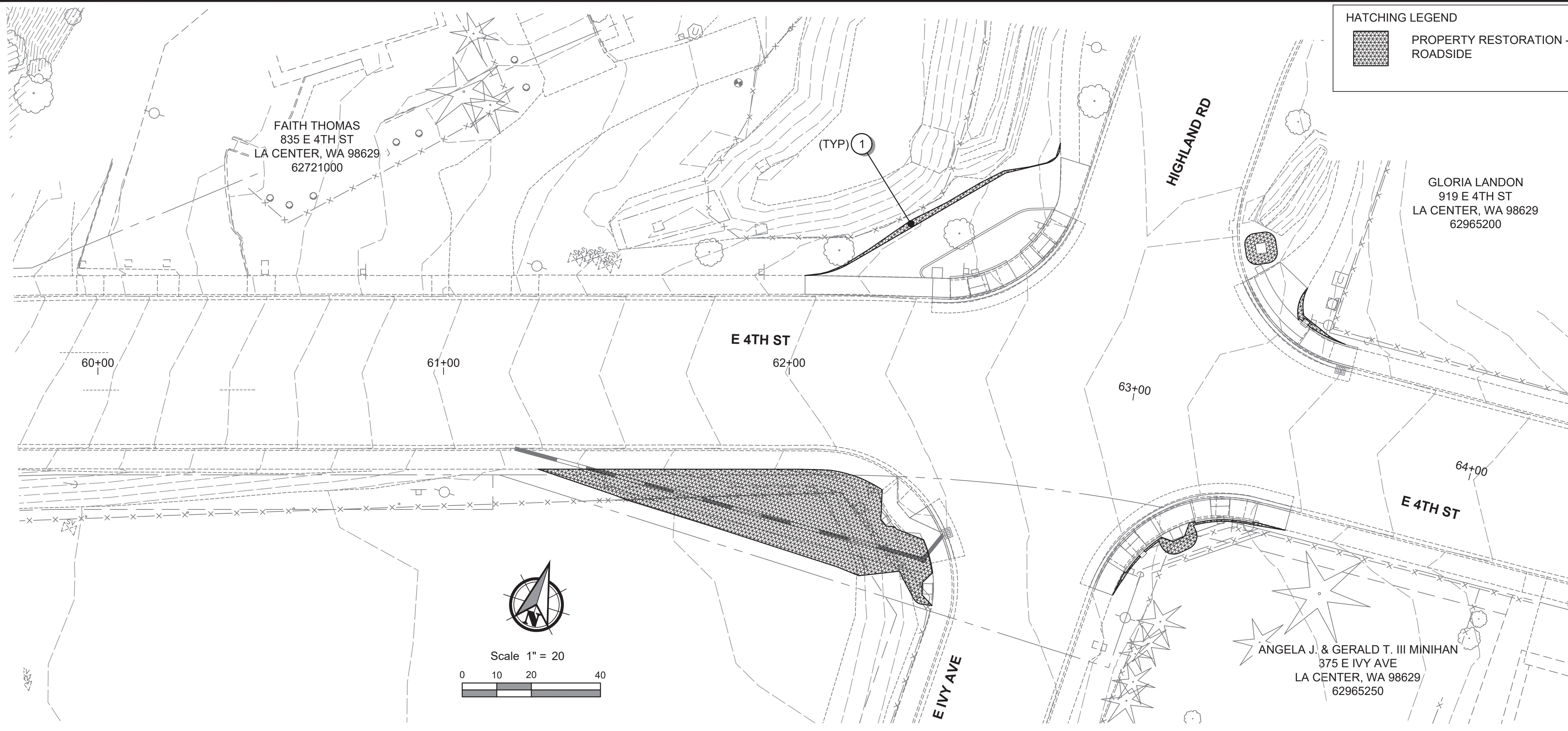
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CHECKED:
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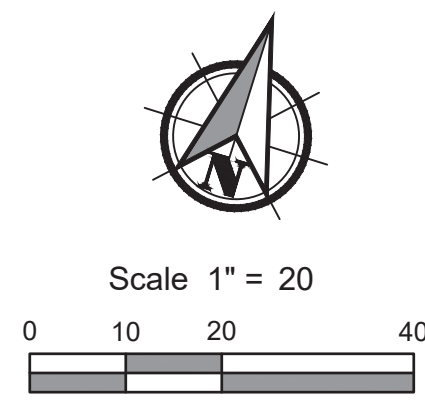
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HATCHING LEGEND

	PROPERTY RESTORATION - ROADSIDE
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PROPERTY RESTORATION NOTES

- ① SITE PROPERTY RESTORATION - ROADSIDE. AREAS TO BE RESTORED TO PREVIOUS EXISTING CONDITION. SEE SPECIAL PROVISIONS.

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**PROPERTY RESTORATION FOR:
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A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



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CMK
MAY 2024
71486.000

SHEET ID
PP01

SHEET **47** OF **50**

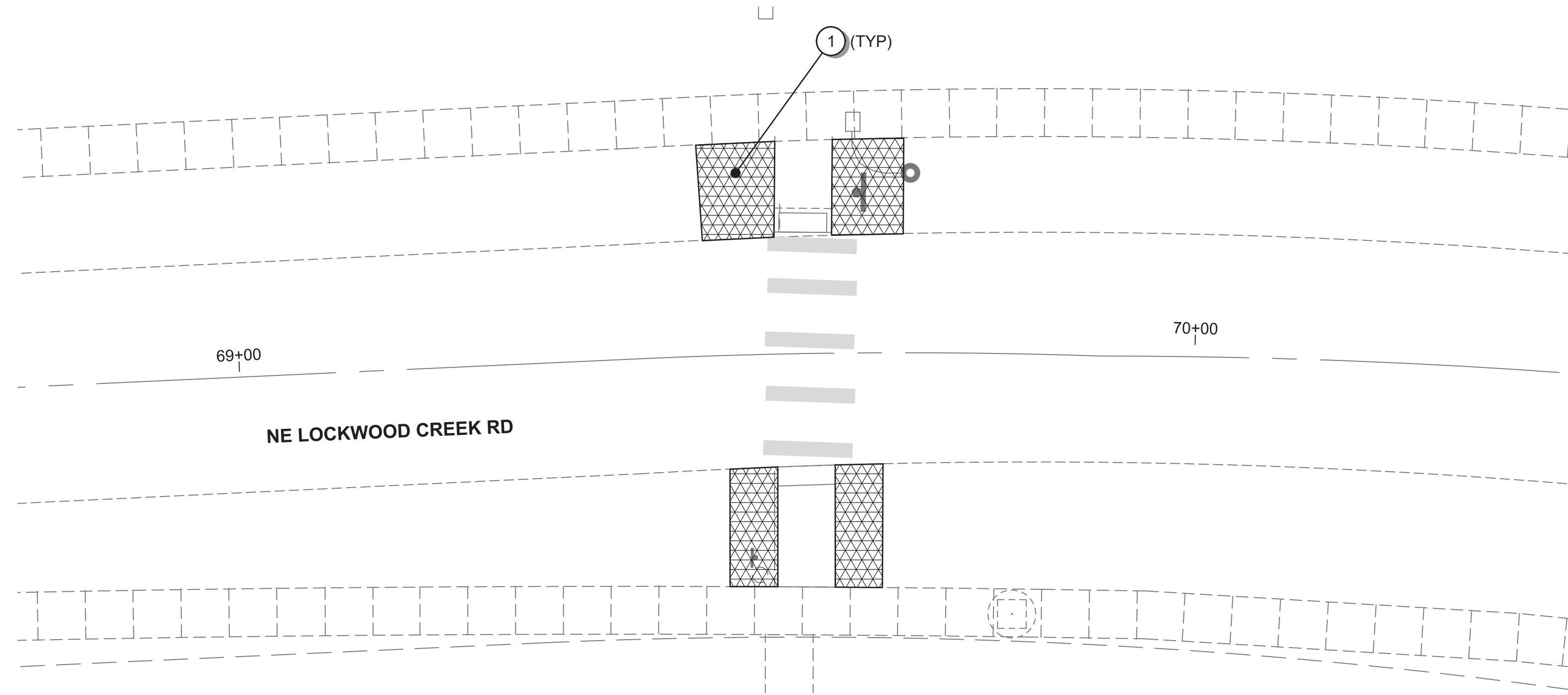
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BID ITEM	UNIT	TOTAL
PROPERTY RESTORATION AREA	SF	275

FINAL PLANS

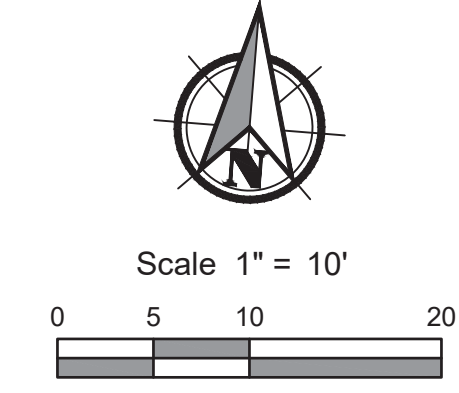
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HATCHING LEGEND

 PROPERTY RESTORATION - ROADSIDE



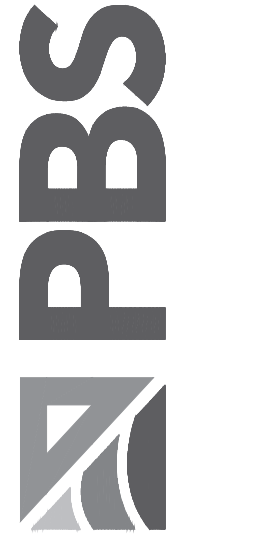
PROPERTY RESTORATION NOTES

- ① SITE PROPERTY RESTORATION - ROADSIDE. AREAS TO BE RESTORED TO PREVIOUS EXISTING CONDITION. SEE SPECIAL PROVISIONS.

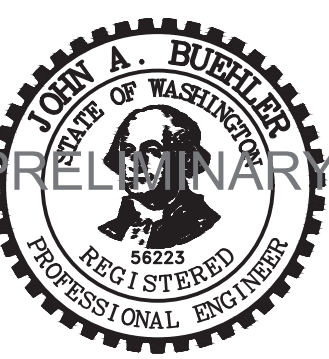
SUMMARY OF QUANTITIES		
BID ITEM	UNIT	TOTAL
PROPERTY RESTORATION AREA	SF	280

FINAL PLANS

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PROPERTY RESTORATION FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON

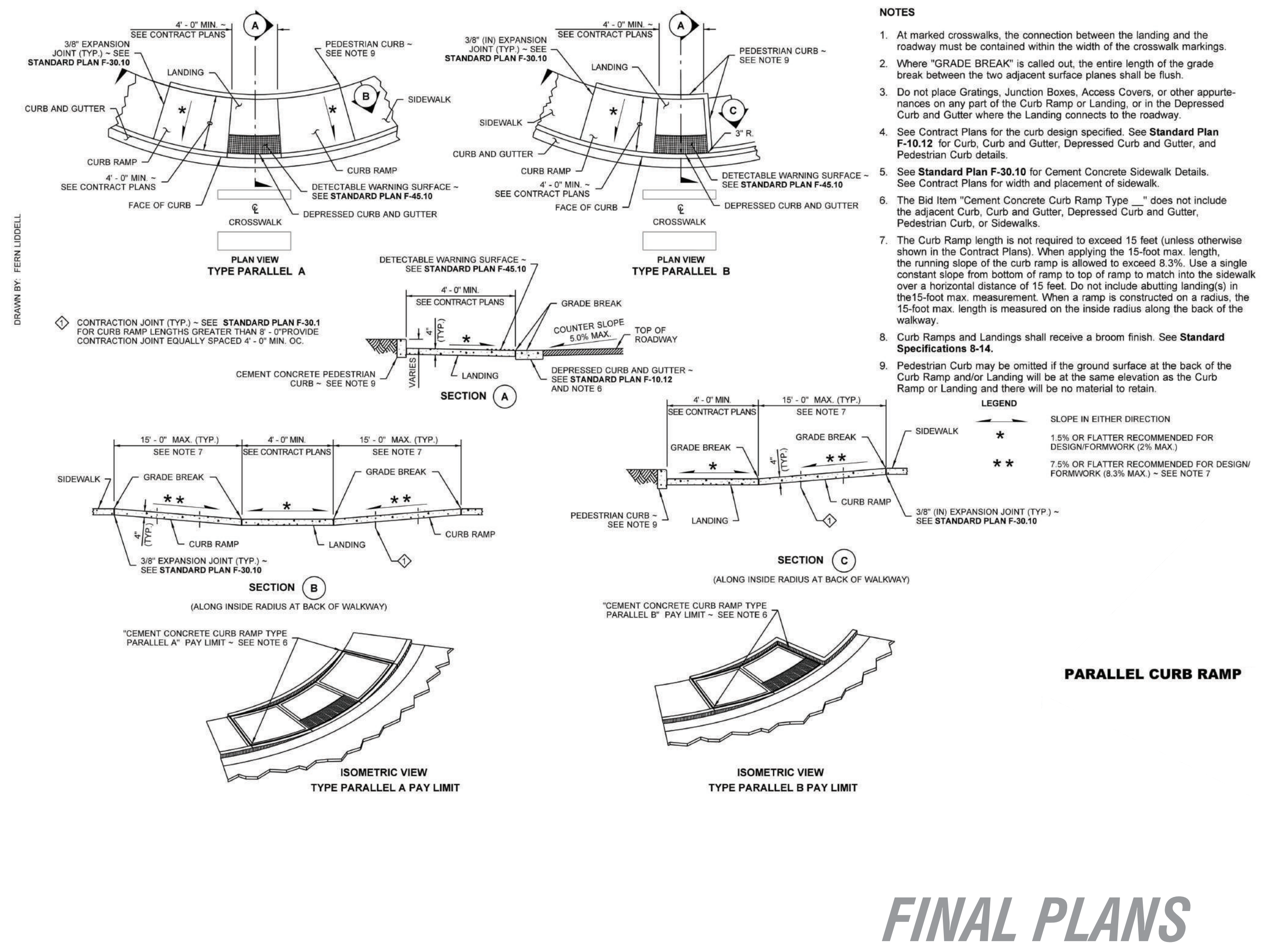
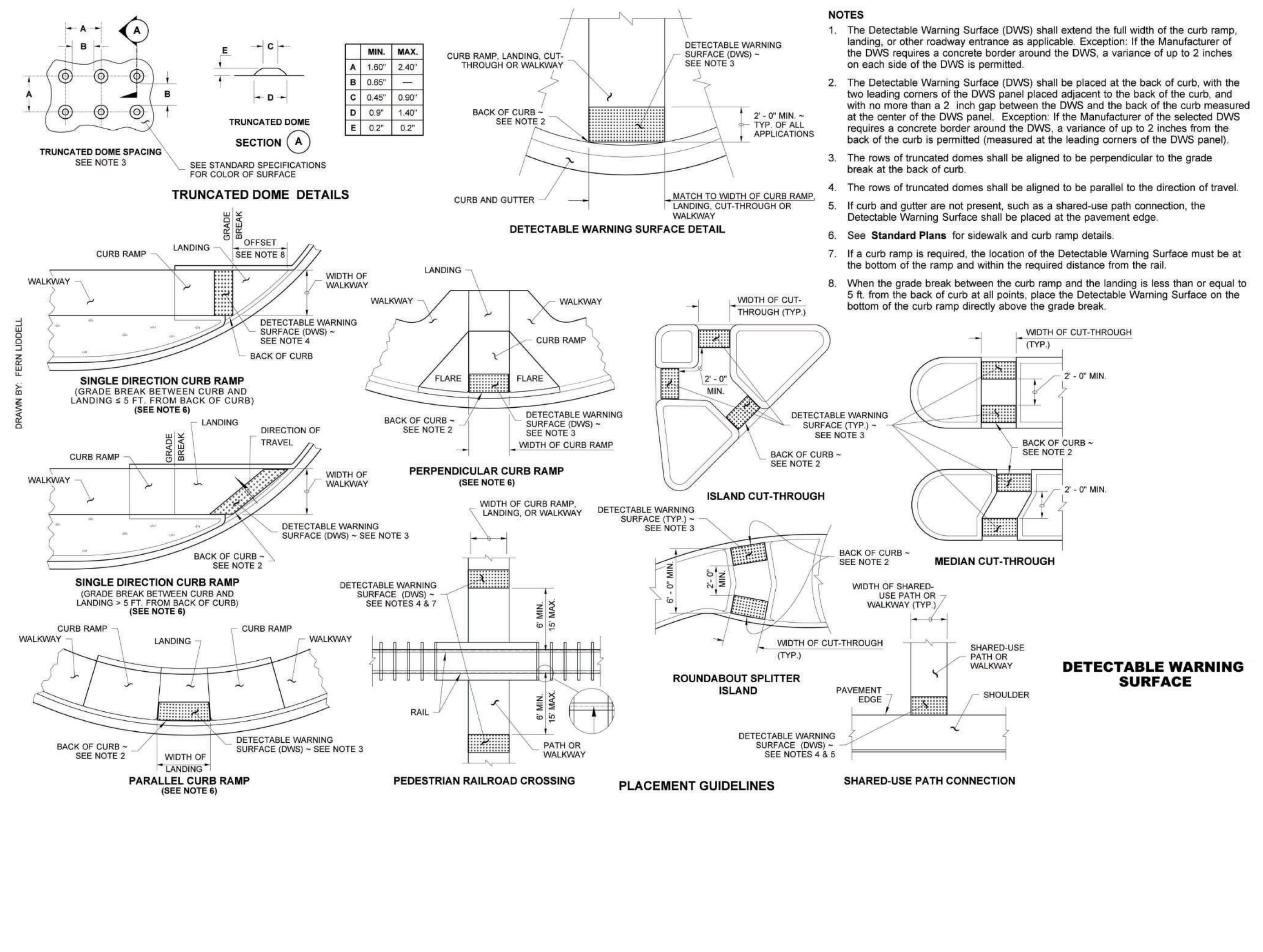
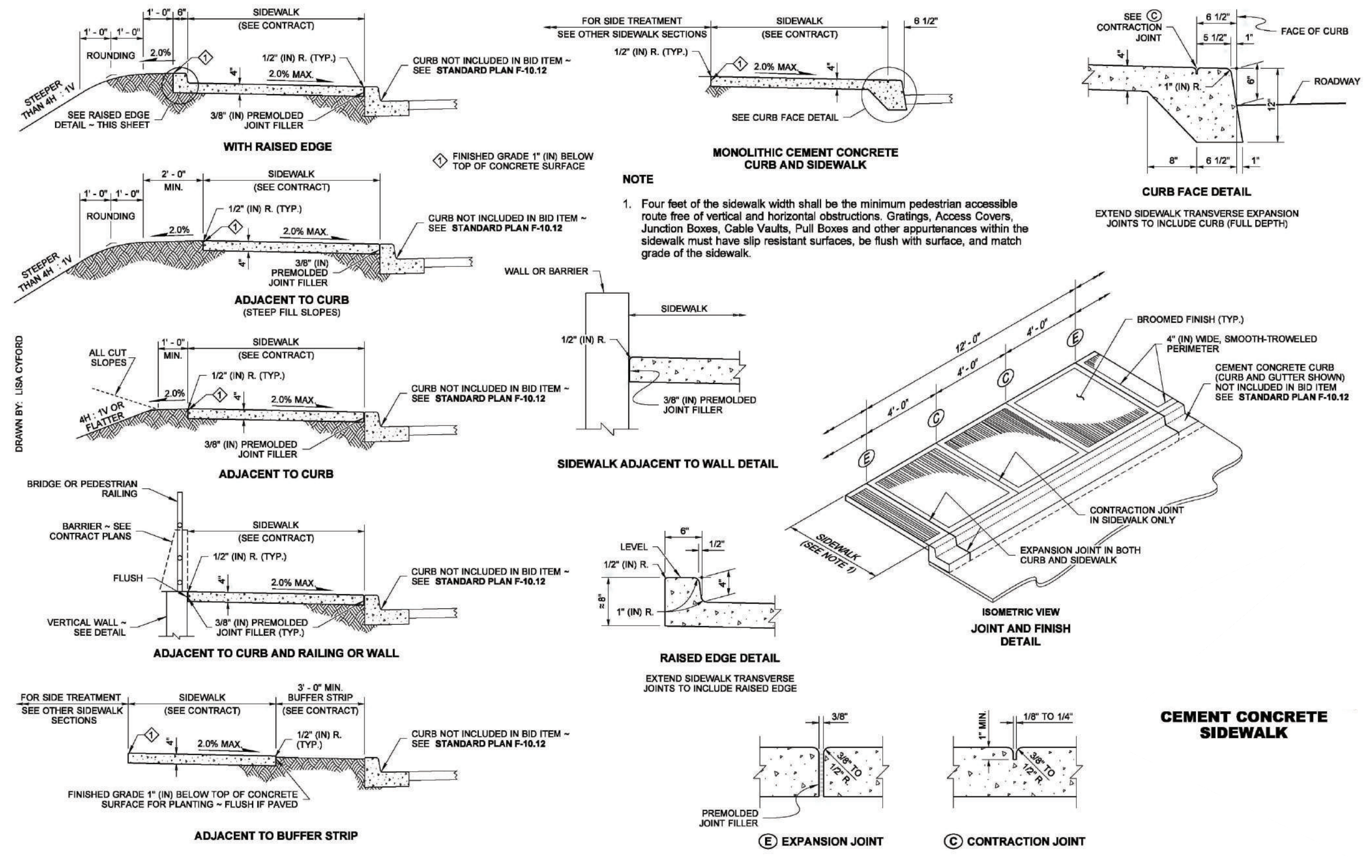
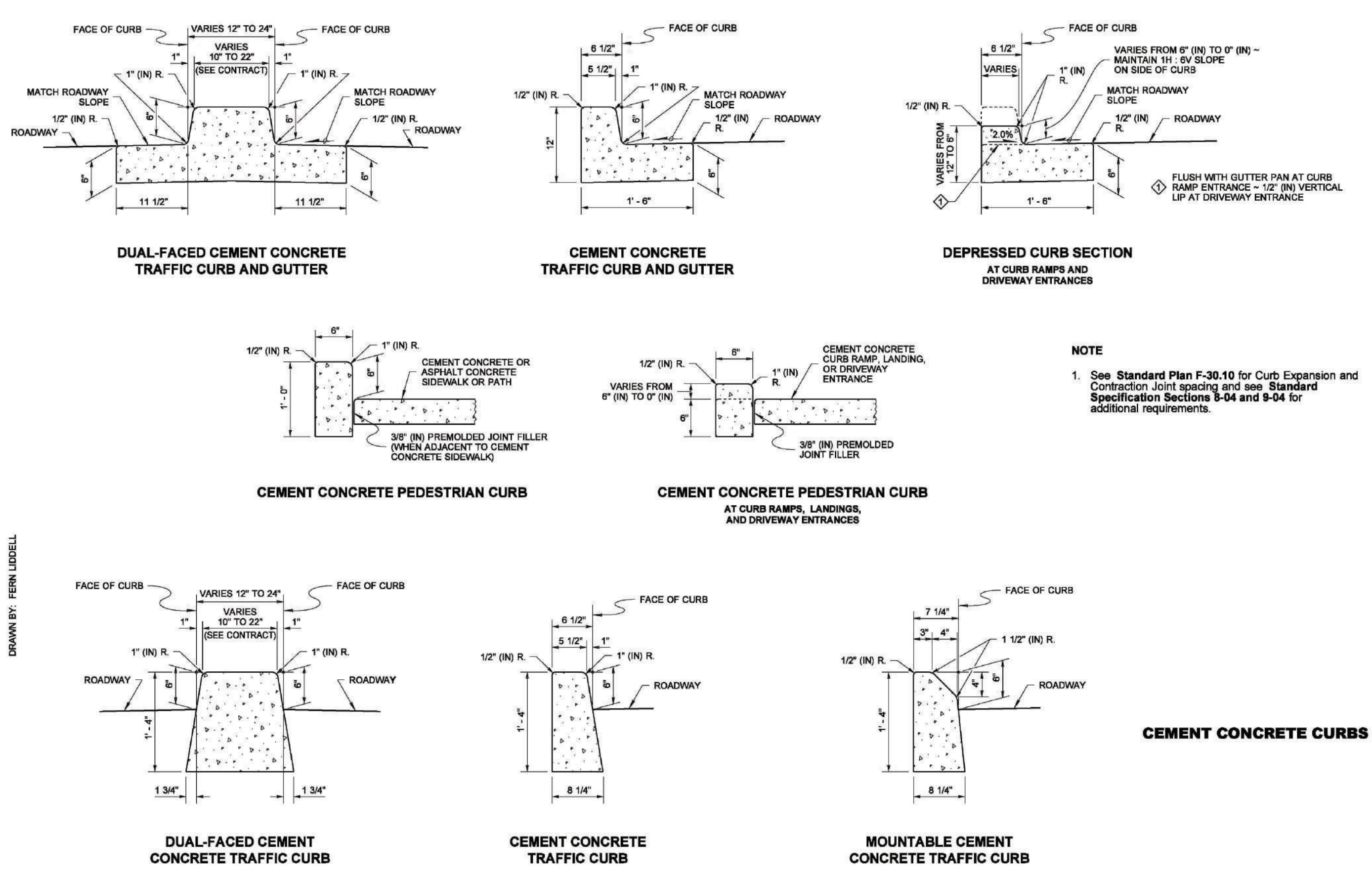


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71486.000

SHEET ID
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SHEET **48** OF **50**

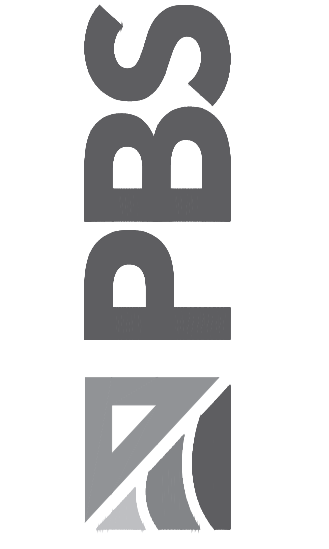
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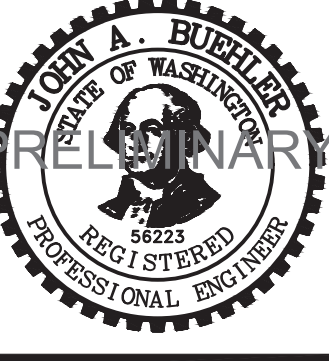
- NOTES**
- The Detectable Warning Surface (DWS) shall extend the full width of the curb ramp, landing, or other roadway entrance as applicable. Exception: If the Manufacturer of the DWS requires a concrete border around the DWS, a variance of up to 2 inches on each side of the DWS is permitted.
 - The Detectable Warning Surface (DWS) shall be placed at the back of curb, with the two leading corners of the DWS panel placed adjacent to the back of the curb, and with no more than a 2 inch gap between the DWS and the back of the curb measured at the center of the DWS panel. Exception: If the Manufacturer of the selected DWS requires a concrete border around the DWS, a variance of up to 2 inches from the back of the curb is permitted (measured at the leading corners of the DWS panel).
 - The rows of truncated domes shall be aligned to be perpendicular to the grade break at the back of curb.
 - The rows of truncated domes shall be aligned to be parallel to the direction of travel.
 - If curb and gutter are not present, such as a shared-use path connection, the Detectable Warning Surface shall be placed at the pavement edge.
 - See **Standard Plans** for sidewalk and curb ramp details.
 - If a curb ramp is required, the location of the Detectable Warning Surface must be at the bottom of the ramp and within the required distance from the rail.
 - When the grade break between the curb ramp and the landing is less than or equal to 5 ft. from the back of curb at all points, place the Detectable Warning Surface on the bottom of the curb ramp directly above the grade break.

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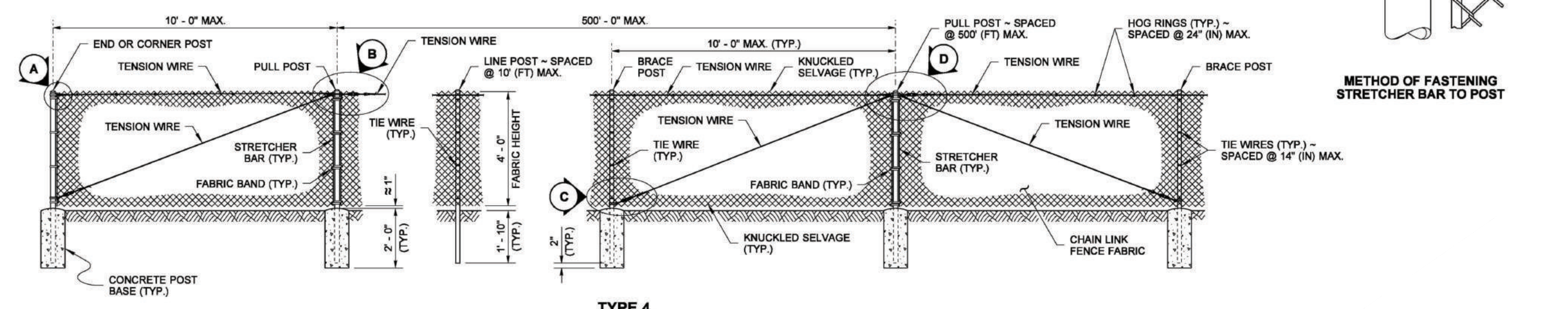
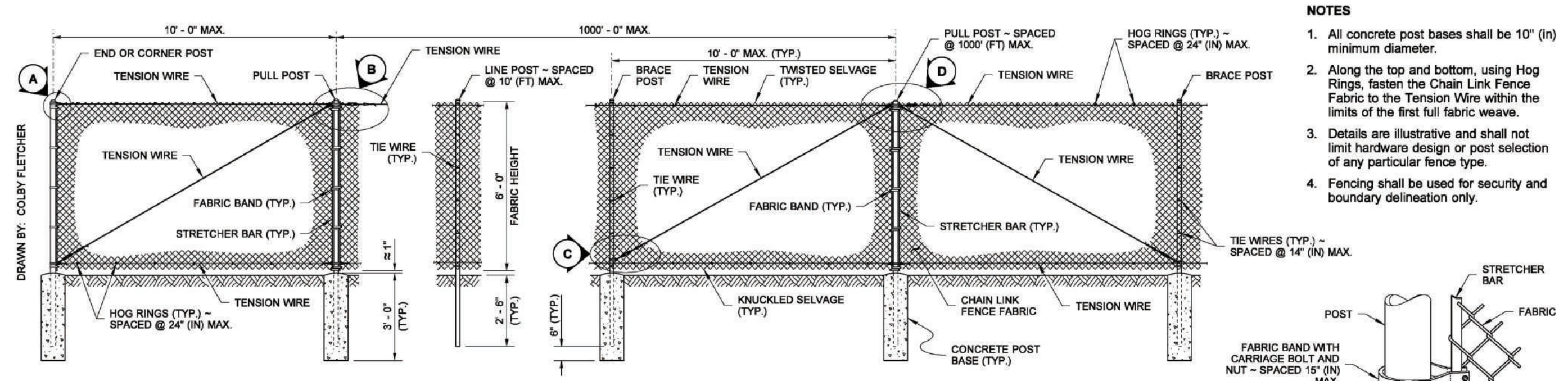
WSDOT STANDARD DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



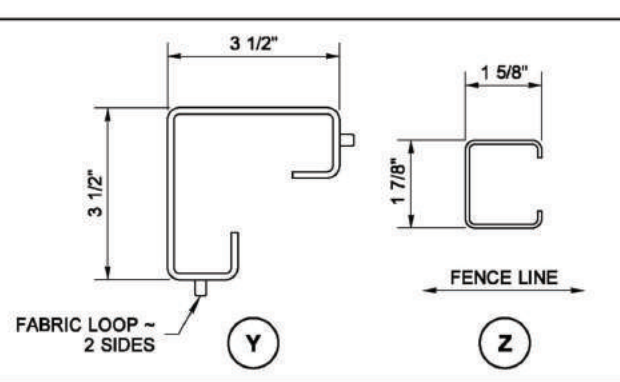
DESIGNED:
 JAB
 CHECKED:
 CMK
 MAY 2024
 71486.000

SHEET ID
STD01
 SHEET 49 OF 50

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POST AND RAIL SPECIFICATIONS				
POST	PIPE	ROLL FORMED		
		NOM. SIZE (SCH. 40) I.D.	SECTION	WEIGHT (b/R)
END, CORNER, OR PULL POST	2 1/2" DIAM.	Y		5.10
LINE OR BRACE POST	2" DIAM.	Z		1.85

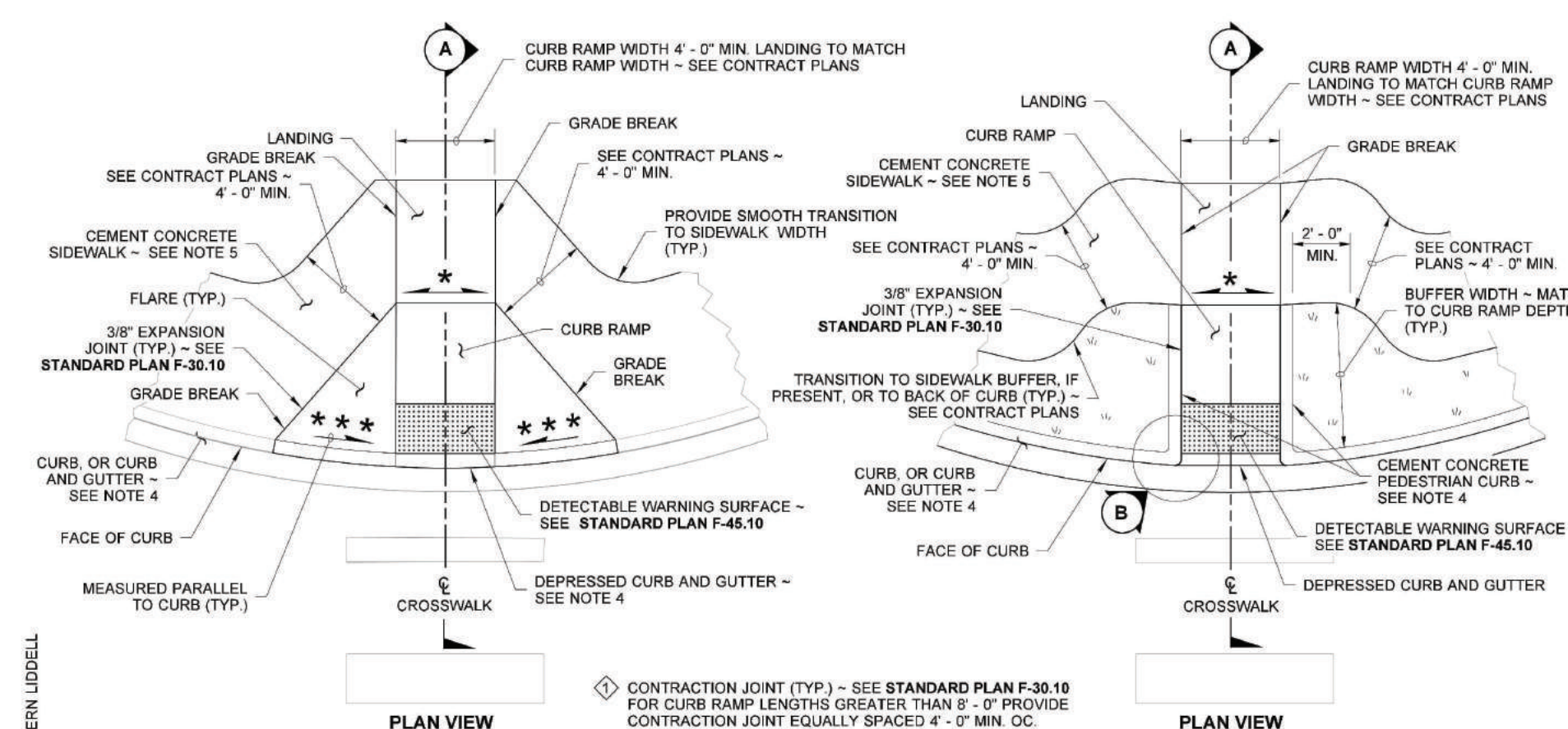
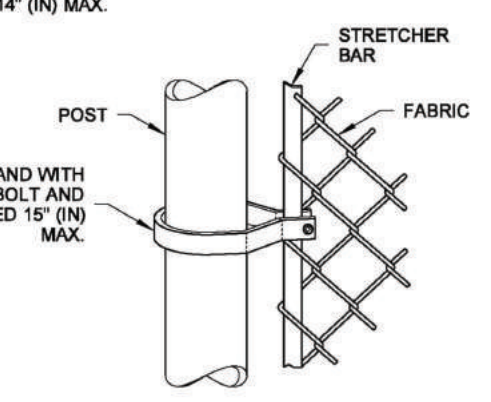


CHAIN LINK FENCE TYPES 3 AND 4

NOTES

- All concrete post bases shall be 10" (in) minimum diameter.
- Along the top and bottom, using Hog Rings, fasten the Chain Link Fence Fabric to the Tension Wire within the limits of the first full fabric weave.
- Details are illustrative and shall not limit hardware design or post selection of any particular fence type.
- Fencing shall be used for security and boundary delineation only.

METHOD OF FASTENING STRETCHER BAR TO POST

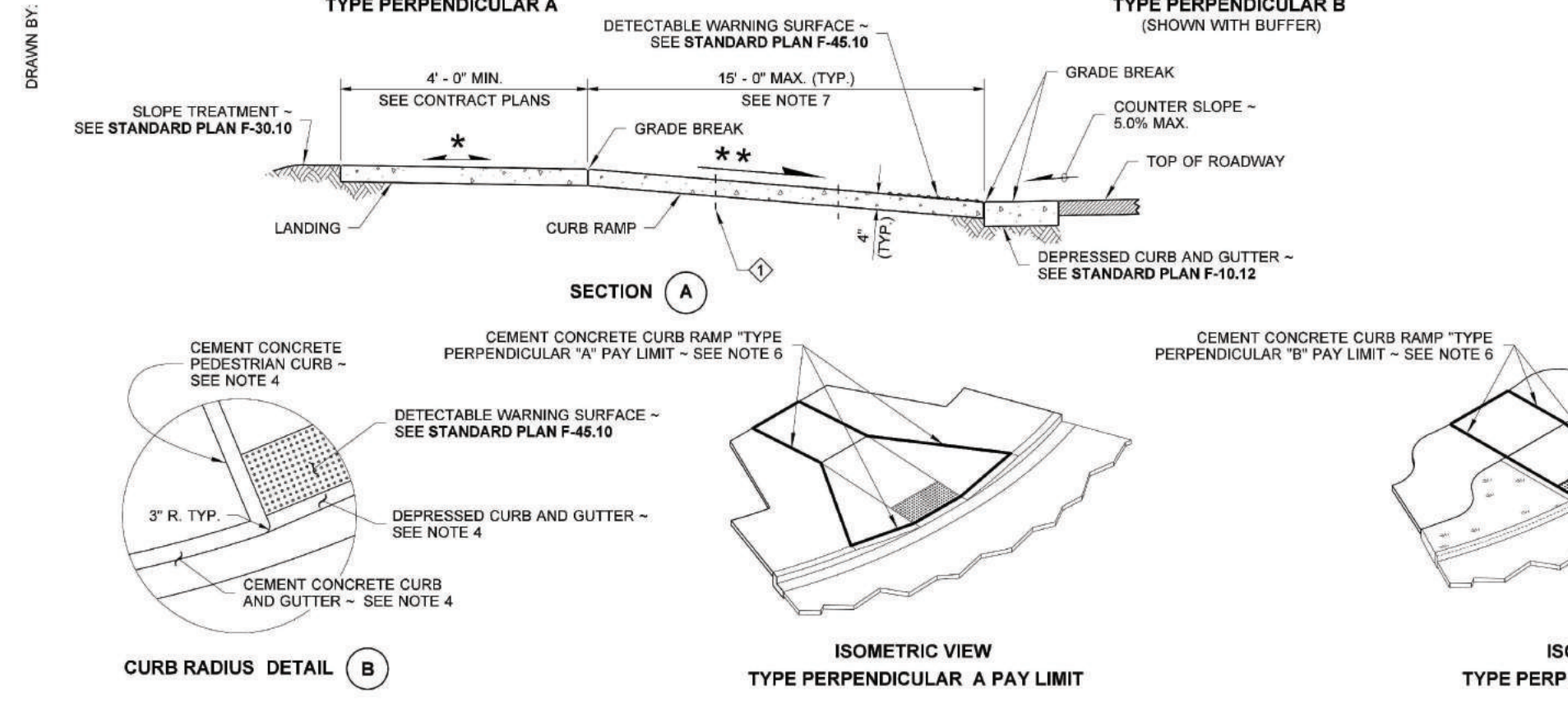


NOTES

- At marked crosswalks, the connection between the curb ramp and the roadway must be contained within the width of the crosswalk markings.
- Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
- Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances on any part of the Curb Ramp or Landing, or in front of the Curb Ramp where it connects to the roadway.
- See Contract Plans for the curb design specified. See **Standard Plan F-10.12** for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
- See **Standard Plan F-30.10** for Cement Concrete Sidewalk Details. See Contract Plans for width and placement of sidewalk.
- The Bid Item "Cement Concrete Curb Ramp Type ..." does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalks.
- The Curb Ramp length is not required to exceed 15 feet (unless shown otherwise in the Contract Plans). When applying the 15-foot max. length, the running slope of the Curb Ramp is allowed to exceed 8.3%. Use a single constant slope from bottom of ramp to top of ramp to match into the landing over a horizontal distance of 15 feet. Do not include the abutting landing in the 15-foot max. measurement.
- Curb Ramps and Landings shall receive a broom finish. See **Standard Specifications 8-14**.
- Pedestrian Curb may be omitted if the ground surface at the back of the Curb Ramp and/or Landing will be at the same elevation as the Curb Ramp or Landing and there will not be material to retain.

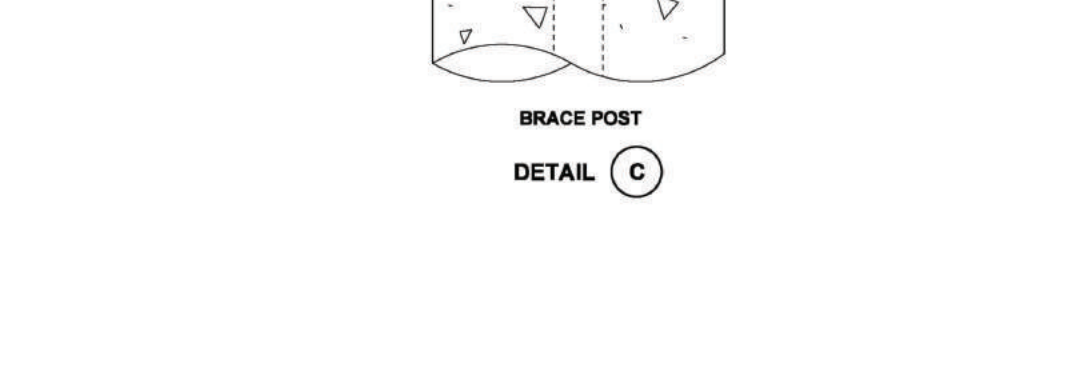
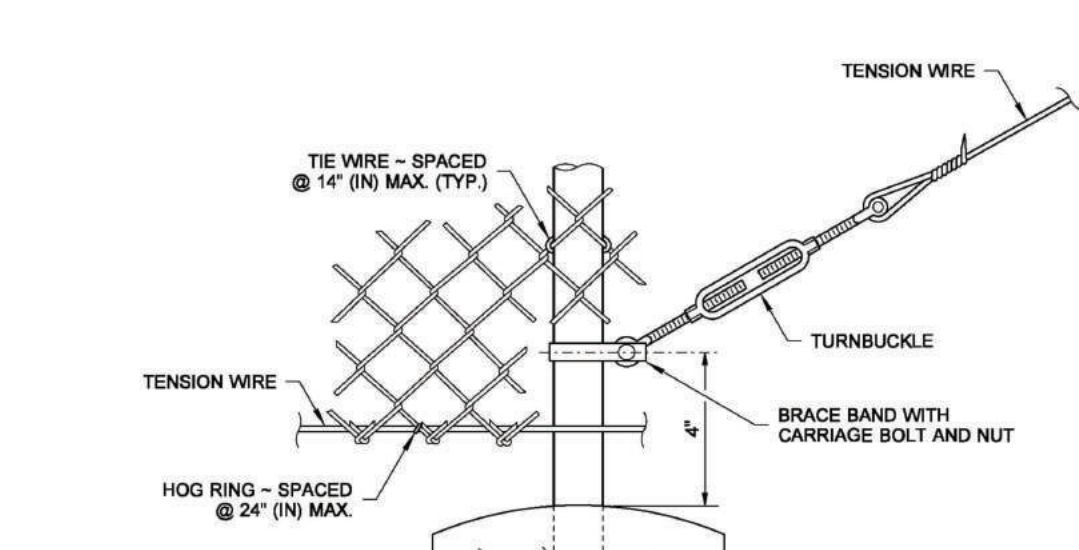
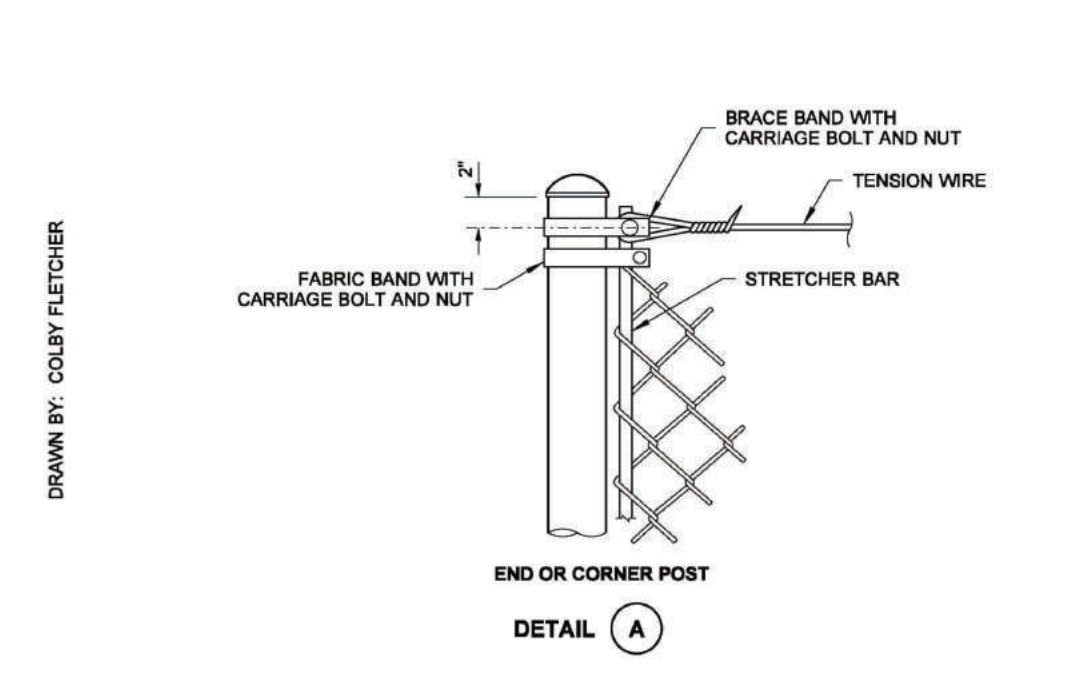
LEGEND

- SLOPE IN EITHER DIRECTION
- 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX.)
- 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX.)
- 9.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (10% MAX.)

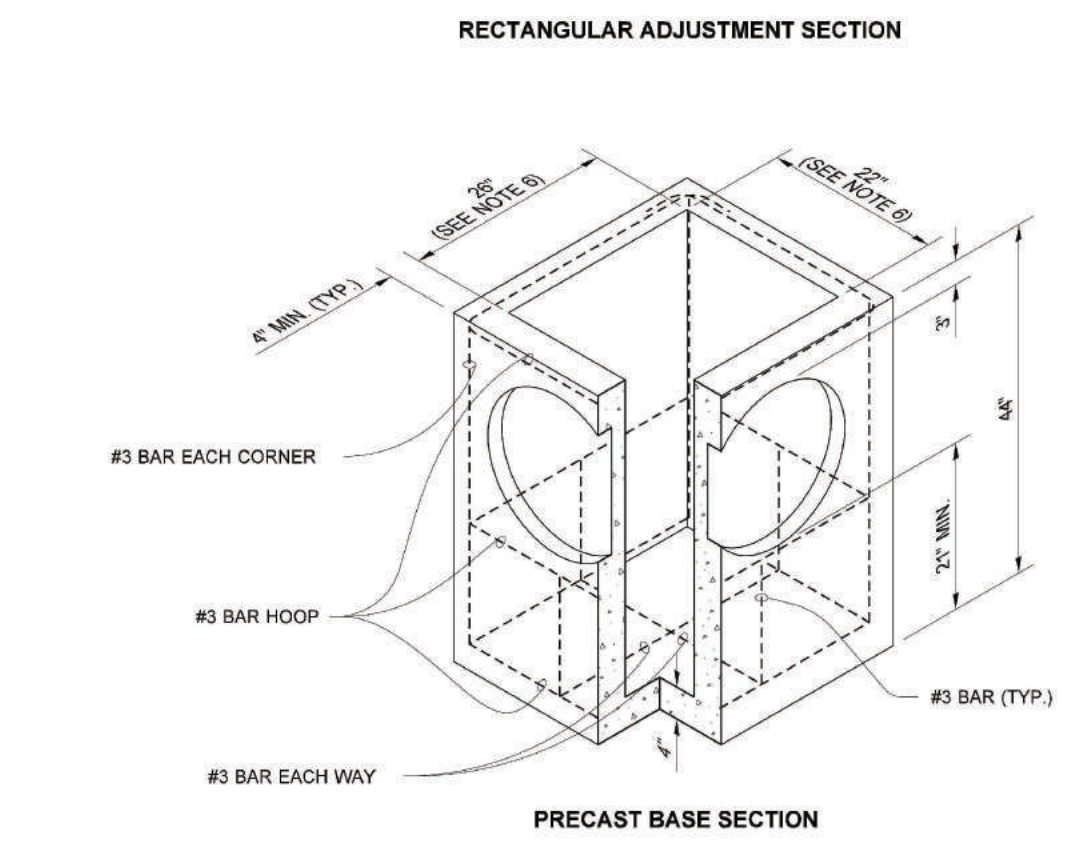
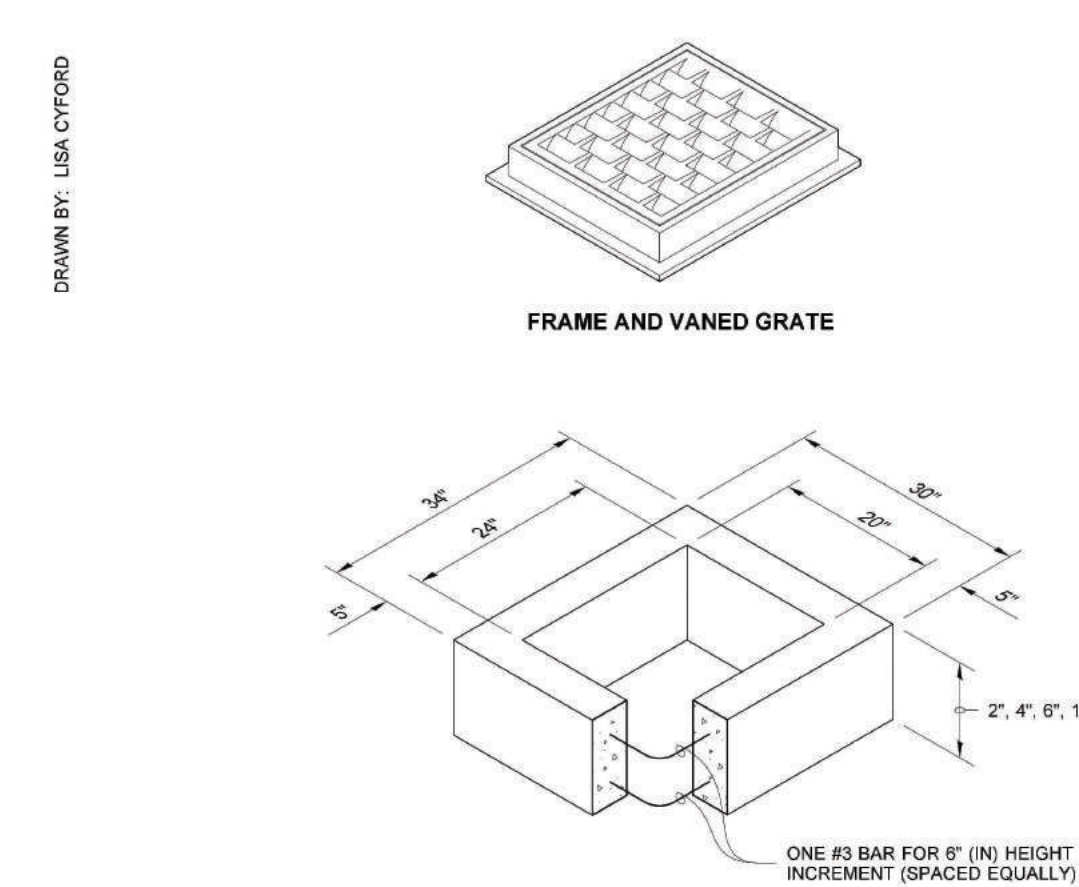


PERPENDICULAR CURB RAMP

Full Size Sheet Format Is 22x34; If Printed Size Is Not 22x34, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.



CHAIN LINK FENCE TYPES 3 AND 4



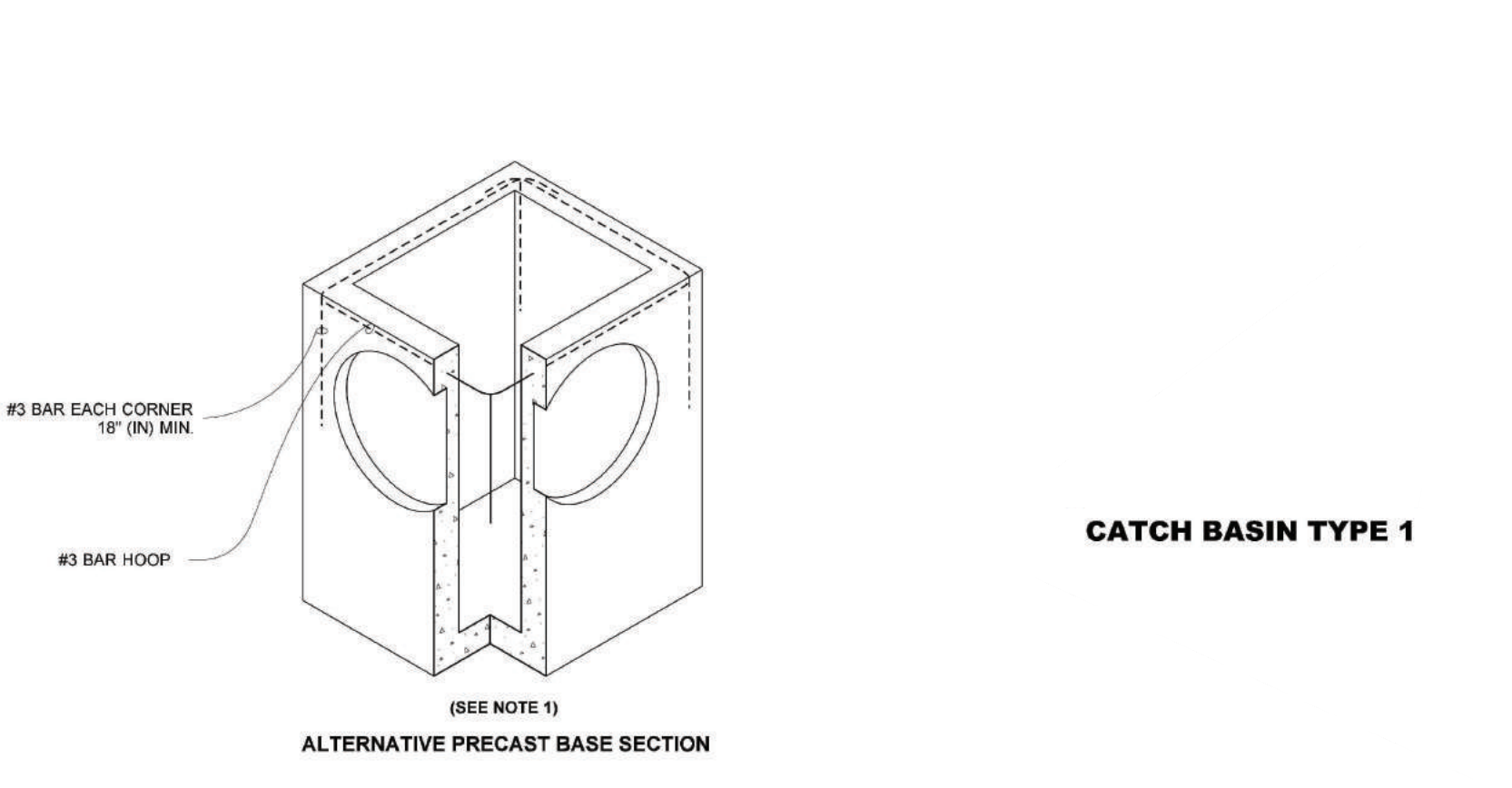
PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

- As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification Section 9-04.3**.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
- The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
- The opening shall be measured at the top of the **Precast Base Section**.
- All pickup holes shall be grouted full after the basin has been placed.

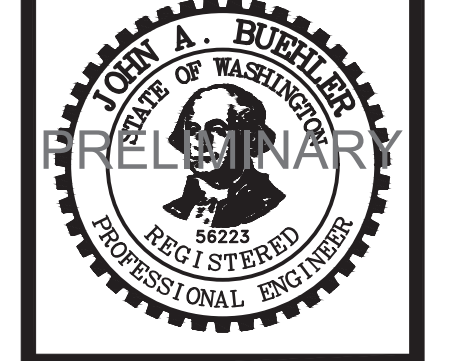


CATCH BASIN TYPE 1

PBS Engineering and Environmental Inc.
 1325 SE Tech Center Drive
 Bellevue, WA 98005
 360.895.3488
 pbsusa.com



WSDOT STANDARD DETAILS FOR:
4TH STREET & HIGHLAND ROAD TRAFFIC SIGNAL
 A SITE LOCATED IN THE CITY OF LA CENTER, WASHINGTON



DESIGNED: JAB
 CHECKED: CMK
 MAY 2024
 71486.000

SHEET ID
STD02
 SHEET 50 OF 50

FINAL PLANS