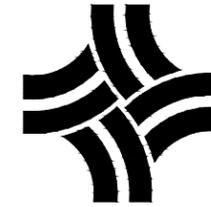


CITY OF THORNTON



CITY OF THORNTON

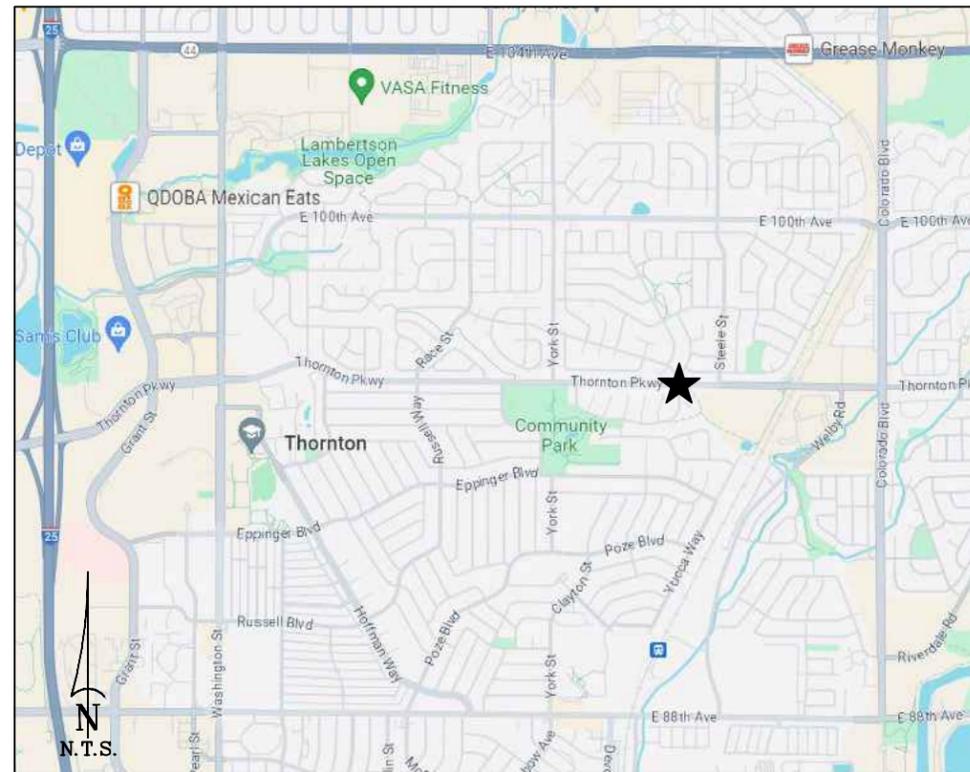
CIP 23-188C TRAFFIC SIGNAL IMPROVEMENTS 97TH AVENUE & THORNTON PARKWAY

INFRASTRUCTURE
DEPARTMENT
TRAFFIC
ENGINEERING
AND OPERATIONS
DIVISION

12450 WASHINGTON STREET
THORNTON, COLORADO
80241
(720) 977-6500

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES AND LEGEND
3. TRAFFIC SIGNAL PLAN - 97TH AVE & THORNTON PKWY
4. STRIPING PLAN - 97TH AVE & THORNTON PKWY
5. FIBER SPLICING DIAGRAM
6. DETAILS
7. DETAILS



★ - PROJECT LOCATION

23-188C
TRAFFIC SIGNAL IMPROVEMENTS

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CB	09/26/2024	100% DESIGN
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 FIELD BOOK NO:

COVER PAGE

SHEET 1 OF 7

CALL UTILITY NOTIFICATION
 CENTER OF COLORADO
 1-800-922-1987
 OR 303-634-6700
 IN METRO DENVER
 CALL 2-BUSINESS DAYS IN ADVANCE
 BEFORE YOU DIG, GRADE, OR EXCAVATE
 FOR THE MARKING OF UNDERGROUND
 MEMBER UTILITIES

DAVID MARSH, PE	PROJECT MANAGER	DATE
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CARLOS A. BOTELLO, EIT	PROJECT MANAGER	DATE
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MARTA JUNYENT, PE, PTOE	SENIOR CIVIL ENGINEER	DATE
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DARRELL E. ALSTON, PE, PTOE	TRAFFIC ENGINEER	DATE
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GENERAL NOTES:

1. THE CONTRACTOR SHALL HAVE IN THE CONTRACTOR'S POSSESSION AT ALL TIMES ONE (1) SIGNED COPY OF THE PLANS AND SPECIFICATIONS WHICH HAVE BEEN APPROVED BY THE OWNER.
2. ALL REQUIRED PERMITS SHALL BE OBTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE LICENSED WITH THE CITY OF THORNTON.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY'S REPRESENTATIVE OF ANY PROBLEM IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
4. ANY CONSTRUCTION DEBRIS OR MUD TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY THE CONTRACTORS CONSTRUCTION.
5. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK FROM ANY ADJACENT PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
6. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGGERS AND OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL UNTIL CONSTRUCTION IS COMPLETE. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
7. THE CONTRACTOR SHALL PROVIDE THE CITY'S REPRESENTATIVE WITH A SET OF PLANS, WHICH SHOW THE "AS BUILT" LOCATIONS OF ALL IMPROVEMENTS, CONDUITS AND PULL BOXES ETC. PRIOR TO INITIAL ACCEPTANCE OF THE WORK.

UTILITIES:

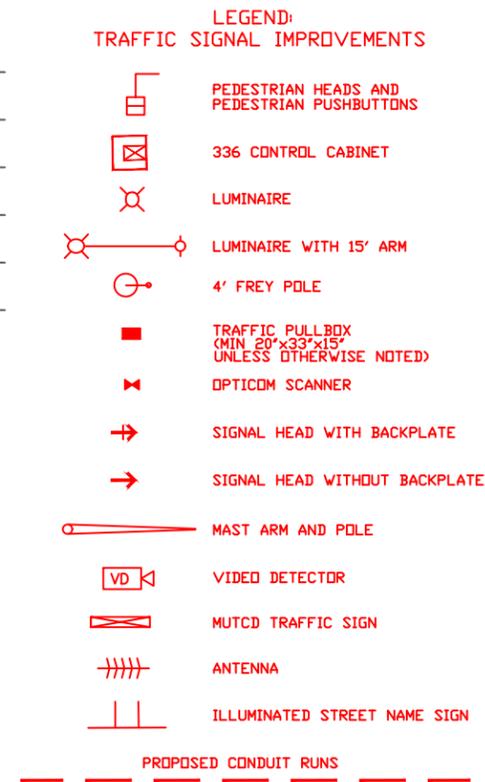
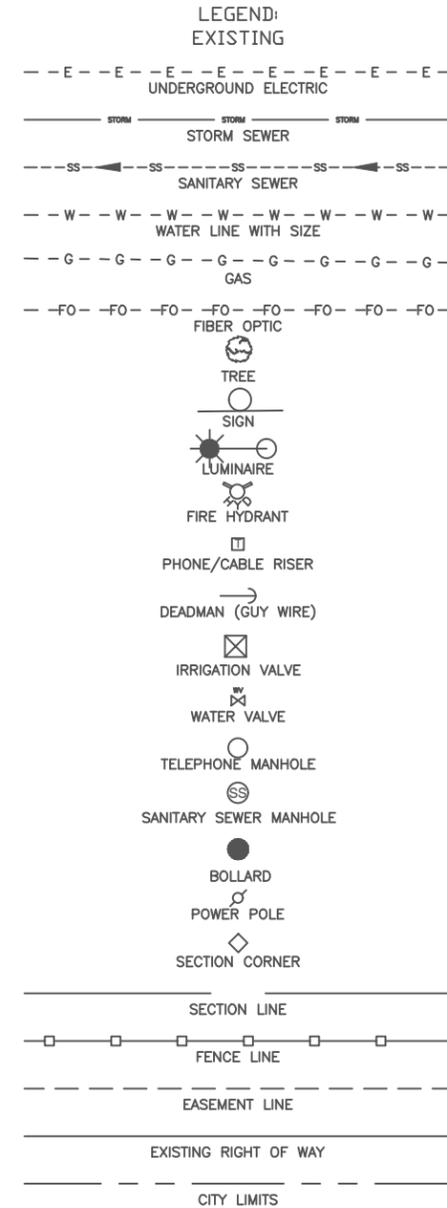
1. IT IS SUGGESTED THAT THE CONTRACTOR INITIATE A REQUEST TO XCEL ENERGY FOR ANY CONSTRUCTION RELATED TEMPORARY AND PERMANENT ELECTRICAL POWER SOURCES AS SOON AS POSSIBLE. IN SOME INSTANCES OVER 30 DAYS MAY BE REQUIRED TO PROVIDE THE SOURCES. THE REQUEST IS TO BE PROCESSED THROUGH: BUILDERS CALL LINE.
2. UTILITY INFORMATION SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. THE CONTRACTOR, AT THE CONTRACTOR'S OWN EXPENSE, SHALL PROTECT ALL EXISTING UTILITIES AND BE RESPONSIBLE FOR THEIR REPAIR IF THEY ARE DAMAGED DURING CONSTRUCTION. ALL WORK PERFORMED IN THE AREA OF EXISTING UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
4. ALL POTHOLING IS CONSIDERED SUBSIDIARY TO THE ITEM BEING INSTALLED AND WILL NOT BE PAID FOR SEPARATELY.

TRAFFIC SIGNALS:

1. ALL WIRING SHALL BE CONTINUOUS FROM CONNECTIONS MADE IN THE HANDHOLE COMPARTMENT OF THE SIGNAL POLE BASE TO THE TERMINAL IN THE COMPARTMENT IN THE CONTROLLER CABINET. SPlicing SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE TRAFFIC ENGINEER. WIRING FOR VIDEO DETECTION SHALL BE CONTINUOUS FROM THE CAMERA CONNECTIONS TO THE CONNECTIONS IN THE CABINET. WIRING FOR ANTENNA SHALL BE CONTINUOUS FROM THE ANTENNA TO THE CONNECTION IN THE CABINET.
2. ALL ITEM LOCATIONS ARE APPROXIMATE AND ARE TO BE FIELD LOCATED BY THE CONTRACTOR AND REVIEWED BY THE CITY'S REPRESENTATIVE.
3. LUMINAIRE INSTALLATION AND WIRING SHALL BE COMPLETED BY THE CONTRACTOR AND SHALL INCLUDE THE INSTALLATION OF AN IN-LINE FUSE AT THE BASE OF EACH SIGNAL POLE FOR THE LUMINAIRE.
4. ALL ITEMS OF WORK THAT ARE NECESSARY FOR A COMPLETE INSTALLATION THAT ARE NOT SHOWN IN THE LIST OF CONTRACT BID ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE TRAFFIC SIGNAL AND WILL NOT BE PAID FOR SEPARATELY.
5. CONTRACTOR TO PROVIDE NOTICE TO CITY OF THORNTON, TRAFFIC ENGINEERING AND OPERATIONS DIVISION, 720-977-6477, AT LEAST 24 HOURS (1 BUSINESS DAY) PRIOR TO PICKING UP SIGNAL POLES, MAST ARMS, ETC., OR DELIVERING SALVAGED EQUIPMENT. SIGNAL POLES AND MAST ARMS ARE TO BE PICKED UP AND SALVAGED EQUIPMENT RETURNED TO THE CITY OF THORNTON INFRASTRUCTURE MAINTENANCE CENTER AT 12450 WASHINGTON STREET, THORNTON, COLORADO, 80241. DELIVERY AND PICKUP OF EQUIPMENT FROM THE INFRASTRUCTURE MAINTENANCE CENTER SHALL ONLY BE ALLOWED BETWEEN THE HOURS OF 7:30 AM AND 3:00 PM, MONDAY THROUGH FRIDAY.

CONSTRUCTION:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE JOB SITE AT ALL TIMES. NO ADDITIONAL PAYMENT WILL BE MADE FOR DEWATERING, DITCHES, PIPES, OR ANY OTHER TEMPORARY DRAINAGE APPURTENANCE NECESSARY OR ORDERED BY THE CITY'S REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE AND REASONABLY DRAIN THE JOB SITE THROUGHOUT CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY EROSION CONTROL.
3. ALL BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS.
4. CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY FROM DAMAGE INCLUDING DRIVES, FENCES, RETAINING WALLS, TREES, VEGETATION, ETC. ALL DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE, TO THE CITY OF THORNTON'S REQUIREMENTS, WITHIN 24 HOURS OF NOTIFICATION BY THE CITY.
5. THE CONTRACTOR IS ADVISED THAT ALL TREES AND SHRUBS ARE TO REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED IN THE PLANS. CARE SHALL BE TAKEN TO PROTECT ALL TREES AND SHRUBS FROM DAMAGE DURING CONSTRUCTION. ALL DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE CITY.



CITY OF THORNTON

INFRASTRUCTURE DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS DIVISION

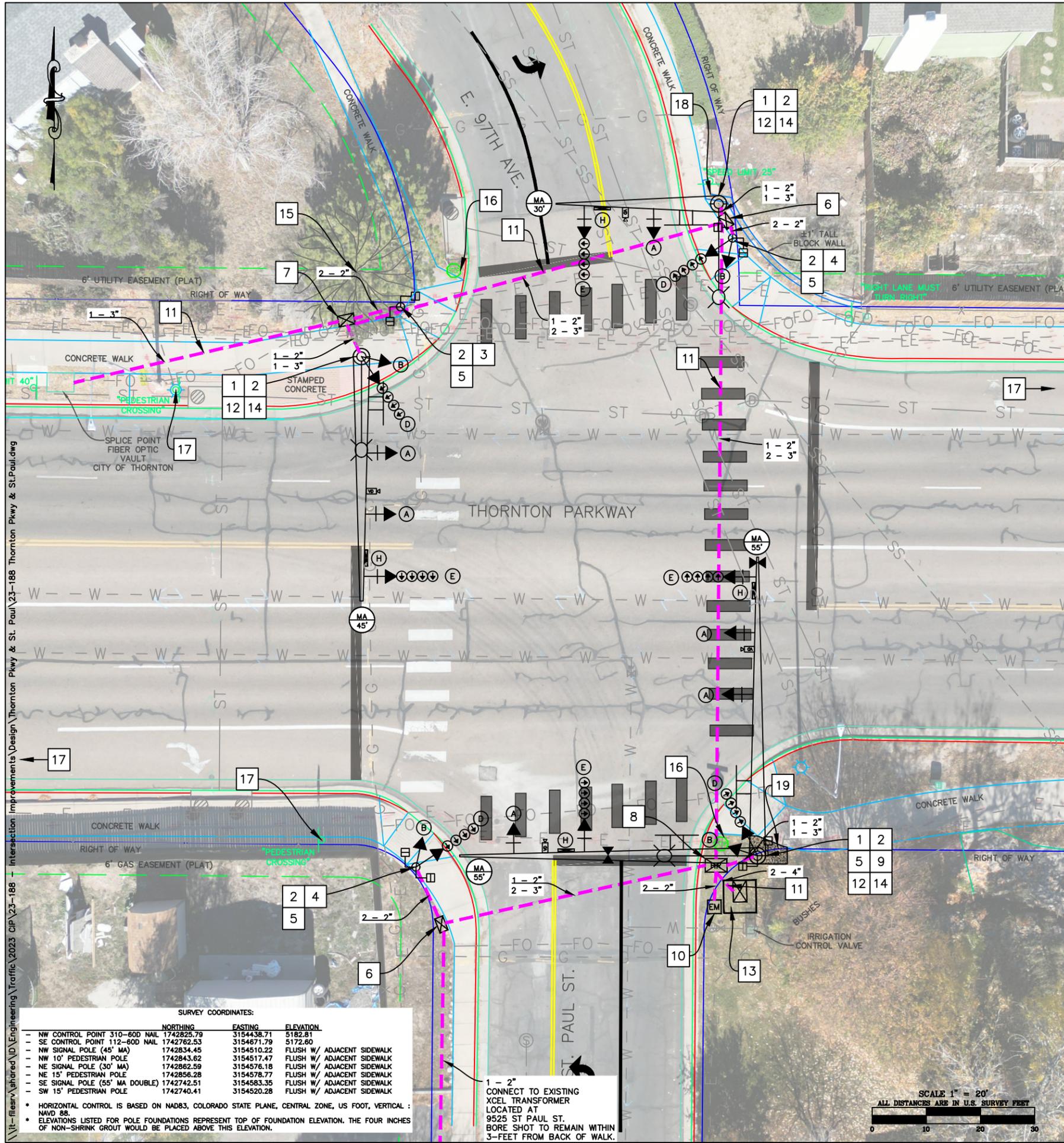
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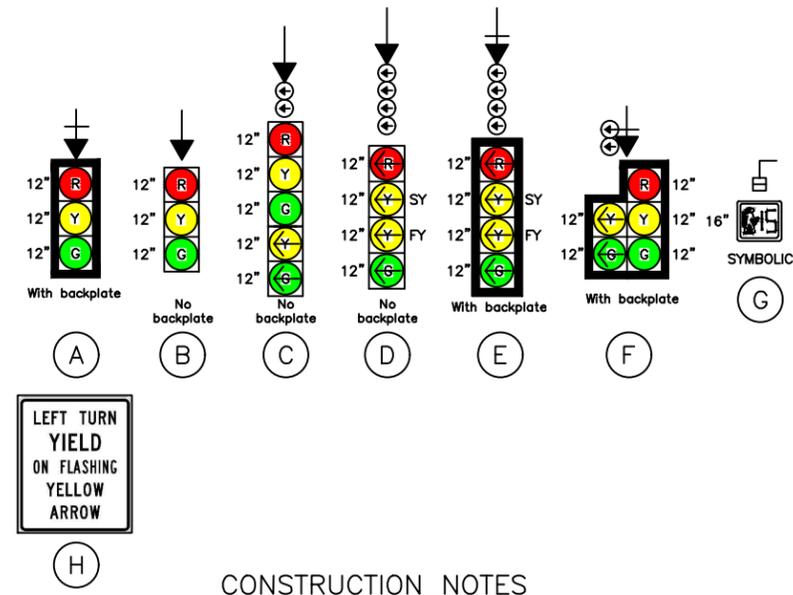
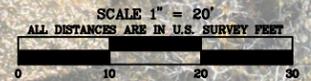
GENERAL NOTES & LEGEND



SURVEY COORDINATES:

	NORTHING	EASTING	ELEVATION
- NW CONTROL POINT 310-60D NAIL	1742825.79	3154438.71	5182.81
- SE CONTROL POINT 112-60D NAIL	1742762.53	3154671.79	5172.60
- NW SIGNAL POLE (45' MA)	1742834.45	3154510.22	FLUSH W/ ADJACENT SIDEWALK
- NW 10' PEDESTRIAN POLE	1742843.62	3154517.47	FLUSH W/ ADJACENT SIDEWALK
- NE SIGNAL POLE (30' MA)	1742862.59	3154576.18	FLUSH W/ ADJACENT SIDEWALK
- NE 15' PEDESTRIAN POLE	1742856.28	3154578.77	FLUSH W/ ADJACENT SIDEWALK
- SE SIGNAL POLE (55' MA DOUBLE)	1742742.51	3154583.35	FLUSH W/ ADJACENT SIDEWALK
- SW 15' PEDESTRIAN POLE	1742740.41	3154520.28	FLUSH W/ ADJACENT SIDEWALK

1 - 2"
CONNECT TO EXISTING
XCEL TRANSFORMER
LOCATED AT
9525 ST PAUL ST.
BORE SHOT TO REMAIN WITHIN
3- FEET FROM BACK OF WALK.



CONSTRUCTION NOTES

- 1 INSTALL FOUNDATION, SIGNAL POLE, MAST ARM, DOUBLE MAST ARM (LENGTH AS SHOWN), LUMINAIRE EXTENSION, 15' LUMINAIRE ARM, LED LUMINAIRE, AND INTERNALLY ILLUMINATED STREET NAME SIGN, PROVIDED BY THE CITY OF THORNTON.
- 2 FURNISH AND INSTALL RESPECTIVE SIGNAL AND PEDESTRIAN HEADS
- 3 FURNISH AND INSTALL 10' PEDESTRIAN POLE
- 4 FURNISH AND INSTALL 15' PEDESTRIAN POLE
- 5 INSTALL PEDESTRIAN PUSH BUTTON ASSEMBLY (SIGN AND BUTTON), PROVIDED BY CITY OF THORNTON
- 6 FURNISH AND INSTALL PULL BOX (20"L x 33"W x 15"D)
- 7 FURNISH AND INSTALL PULL BOX (24"L x 36"W x 24"D)
- 8 FURNISH AND INSTALL HOME RUN PULL BOX (30"L x 48"W x 24"D)
- 9 FURNISH AND INSTALL NEW OPTICOM
- 10 FURNISH AND INSTALL ELECTRIC METER AND BRING POWER FROM IDENTIFIED POINT OF SERVICE. LOCATION TBD
- 11 INSTALL 12 STRAND LATERAL FIBER OPTICAL CABLE - LATERAL
- 12 INSTALL NEW VIDEO DETECTION, PROVIDED BY CITY OF THORNTON. CONTRACTOR SHALL SUPPLY OUTDOOR RATED CAT5 CABLE
- 13 INSTALL 333SD-ITS SIGNAL CONTROLLER CABINET, PROVIDED BY CITY OF THORNTON
- 14 INSTALL R10-27a (LEFT TURN YIELD ON FLASHING YELLOW ARROW) SIGN ADJACENT TO OVERHEAD 4-SECTION, PROVIDED BY CITY OF THORNTON
- 15 TRIM EXISTING TREES/SHRUBS ON NORTHWEST CORNER TO 5' MINIMUM CLEARANCE FROM SIGNAL POLES AND A MINIMUM OF 2' FROM SIDEWALK
- 16 REMOVE EXISTING R1-1 SIGN (STOP SIGN), RETURN TO CITY OF THORNTON
- 17 REMOVE EXISTING S1-1 & W16-9P SIGNS (CROSSWALK & CROSSWALK AHEAD SIGNS), RETURN TO CITY OF THORNTON
- 18 REMOVE AND RELOCATE EXISTING RETAINING WALL. RETAINING WALL SHALL BE A MINIMUM 12" FROM SIGNAL POLE FOR HAND HOLE ACCESS.
- 19 INSTALL CONCRETE PAD FOR PUSH BUTTON ACCESSIBILITY

*STRIPING TO BE INSTALLED/REMOVED BY OTHERS

*ALL MATERIALS BEING SUPPLIED AND/OR RETURNED TO OWNER, SHALL BE PICKED UP/DELIVERED TO CITY OF THORNTON INFRASTRUCTURE MAINTENANCE CENTER AT 12450 WASHINGTON STREET, THORNTON CO 80241.

*CONTRACTOR SHALL POTHOLE AND LOCATE ALL CITY OF THORNTON OWNED UTILITIES (WATER, SEWER, STORM, FIBER, ETC.) WITHIN A 10-FT RADIUS OF ANY PROPOSED CAISSON GREATER THAN 24-INCHES IN DIAMETER AND 48-INCHES IN DEPTH.



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TRAFFIC ENGINEERING AND OPERATIONS DIVISION

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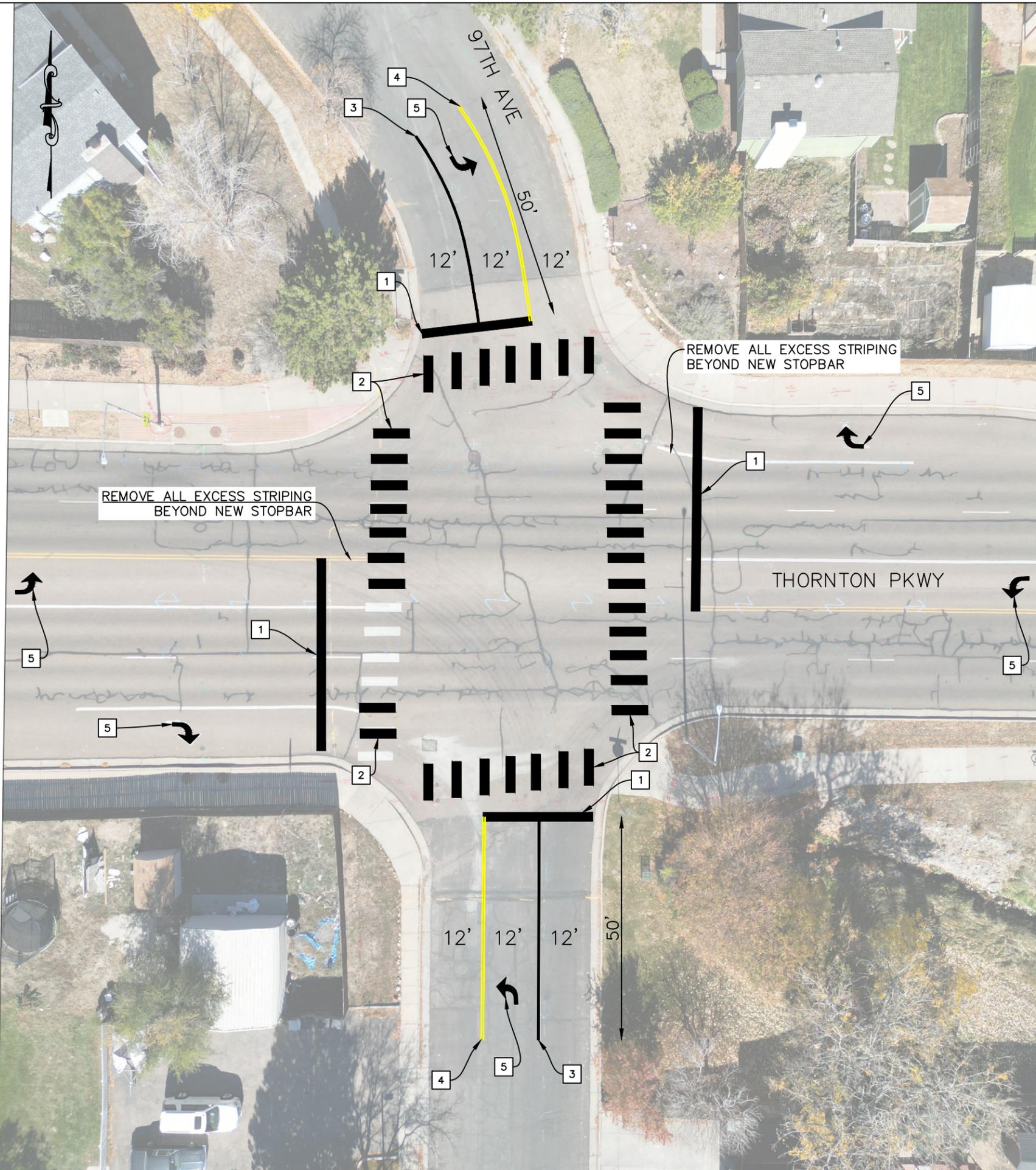
23-188C
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DESIGNED BY:	CAB
FIELD BOOK NO:	

TRAFFIC SIGNAL PLAN
97TH AVE & THORNTON PKWY

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STRIPING NOTES

- 1 INSTALL 24" STOP BAR
- 2 INSTALL 2'x8' CROSSWALK BARS
- 3 INSTALL 8" SOLID WHITE
- 4 INSTALL 4" DOUBLE YELLOW
- 5 INSTALL TURN (LEFT/RIGHT) ARROW SYMBOL

*ALL NEW STRIPING SHALL BE THERMOPLASTIC

NOTE: STRIPING TO BE DONE BY OTHERS



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TRAFFIC ENGINEERING AND OPERATIONS DIVISION

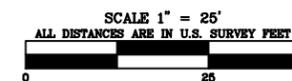
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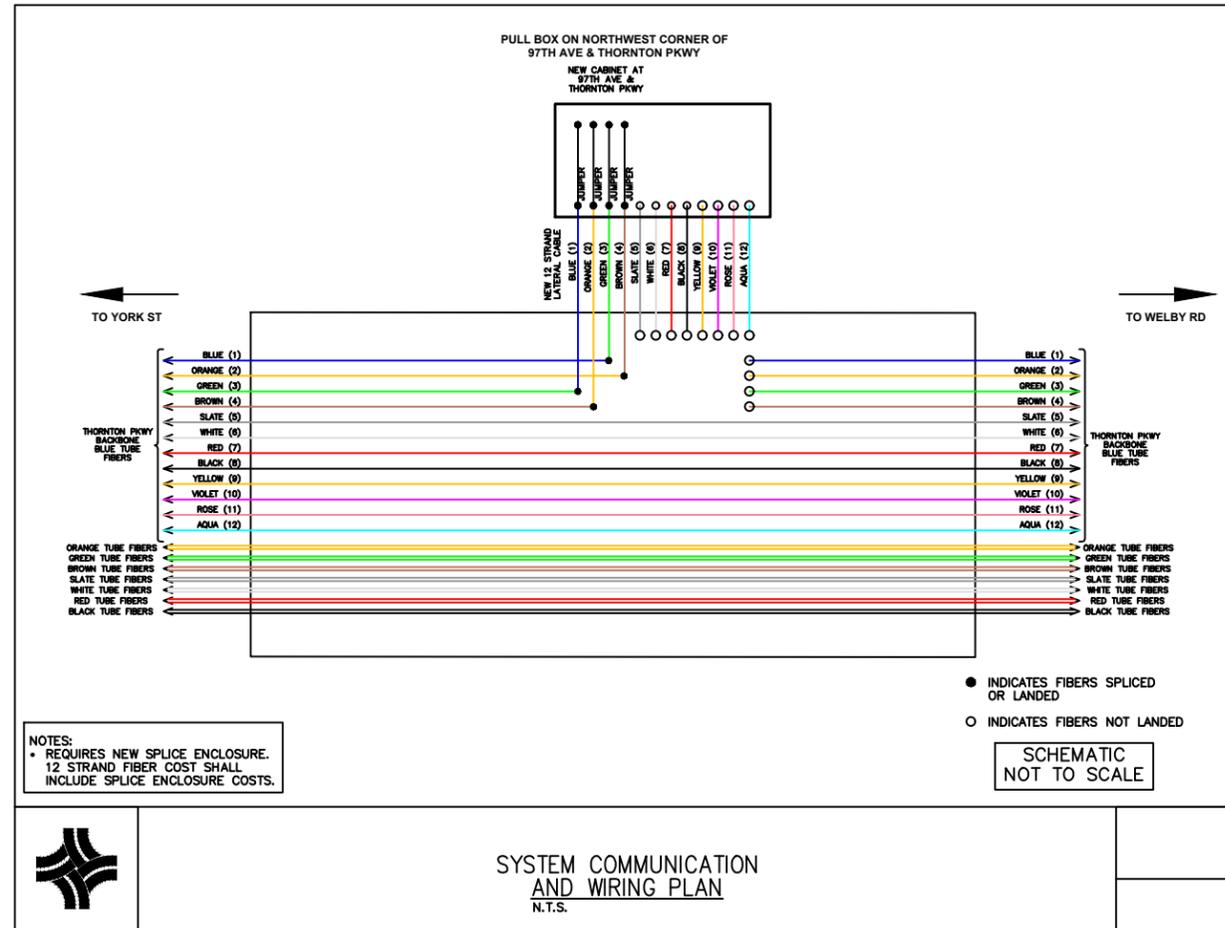
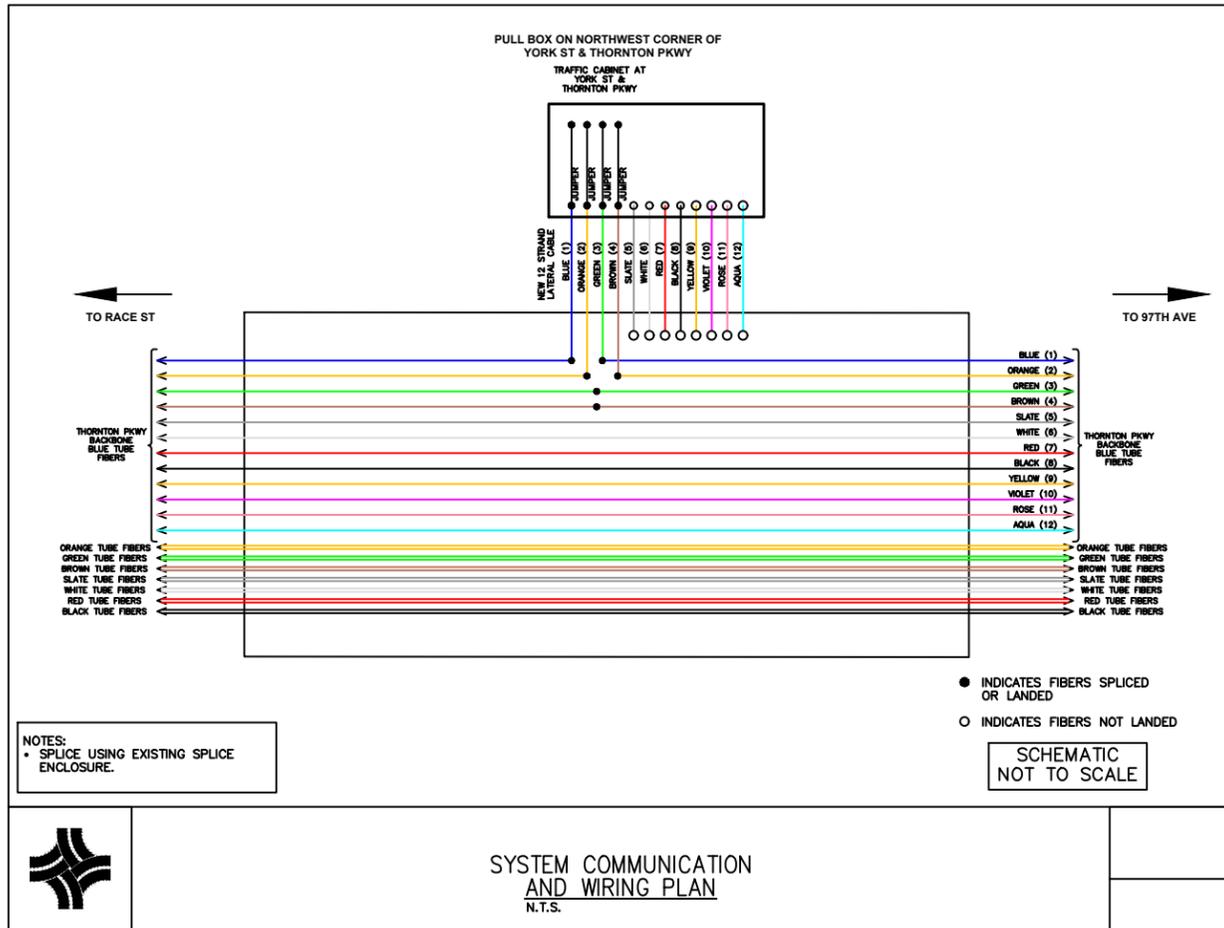
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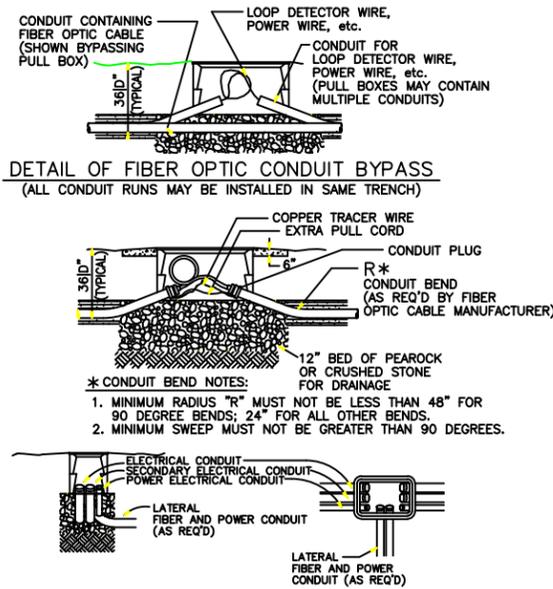
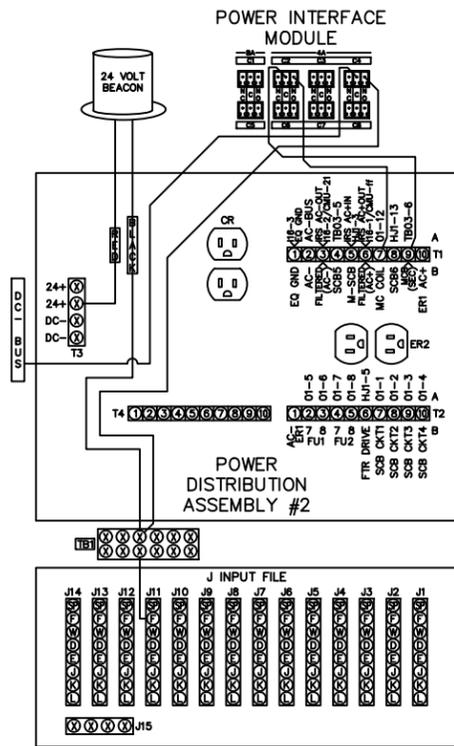


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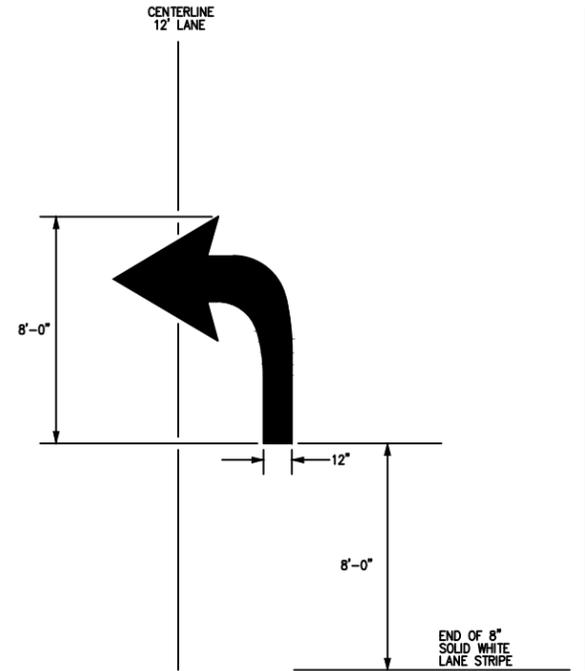
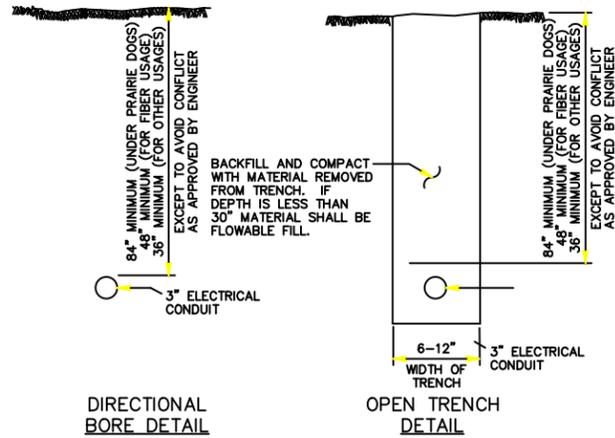
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FIBER SPLICING DIAGRAM

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- PULL BOX NOTES:**
- CONDUIT CENTERLINE SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE FIBER OPTIC CABLE PULLING.
 - ALL PULL BOXES SHALL BE PAID FOR UNDER THE ITEM 613 PULL BOX. ALL PULL BOX TYPES SHALL BE AS TABULATED IN THE PLANS.
 - LOCATION STAKES SHALL BE INSTALLED AT THOSE PULL BOXES SHOWN IN THE PLANS OR IF SO DIRECTED BY THE ENGINEER.
 - ALL WORK TO INSTALL PULL BOX SHALL INCLUDE BUT NOT BE LIMITED TO SAW CUTTING OF PAVEMENT, REMOVAL OF PAVEMENT, CONCRETE AND ALL RELATED WORK AND SHALL BE PAID FOR AS PART OF ITEM 613 PULL BOX.



CITY OF THORNTON, COLORADO

CONTROL CABINET BEACON WIRING DETAIL
N.T.S.

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CITY OF THORNTON, COLORADO

INSTALLATION DETAILS, PULL BOX CONTAINING FIBER OPTIC CABLE
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 REVISED: [blank]
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CITY OF THORNTON, COLORADO

ELECTRICAL CONDUIT DETAILS
N.T.S.

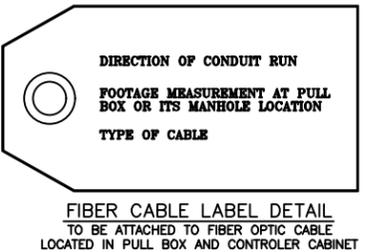
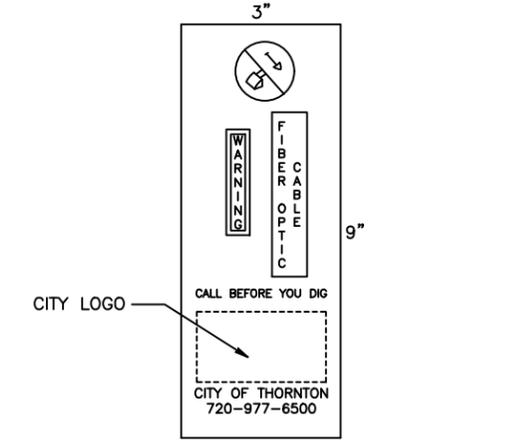
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STANDARDS & SPECIFICATIONS

TURN ARROW PAVEMENT MARKING DETAIL
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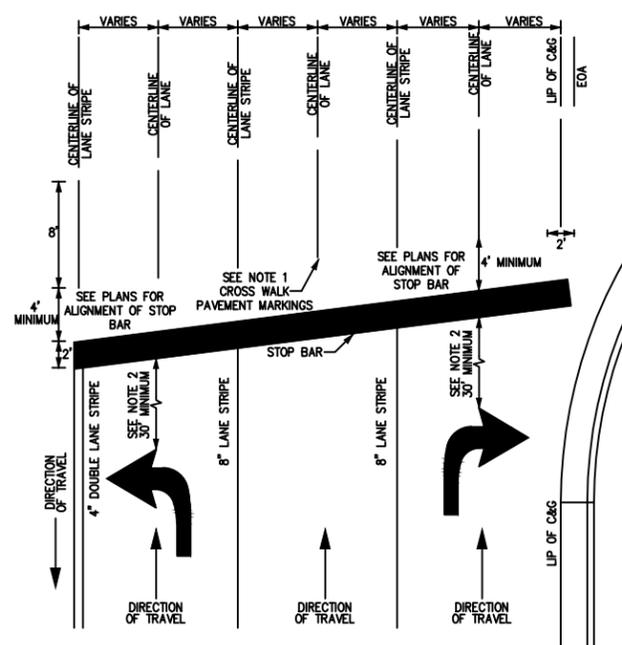
ISSUED: FEBRUARY 2003
 REVISED: APRIL 2010
 DRAWING NO. 700-17



CITY OF THORNTON, COLORADO

FIBER MARKER AND FIBER CABLE LABEL DETAILS
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CITY OF THORNTON, COLORADO

STANDARDS & SPECIFICATIONS

CROSSWALK AND STOP BAR PAVEMENT MARKING DETAIL
N.T.S.

ISSUED: FEBRUARY 2005
 REVISED: APRIL 2010
 DRAWING NO. 700-16A



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