City of Columbus

Department of Public Service
Division of Design and Construction

Capital Improvement Plan (CIP) Sample Plan Sheets

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\01_01 COVER SHEET.dwg

OUTSIDE EDGE OF SHEET

INSIDE BORDER

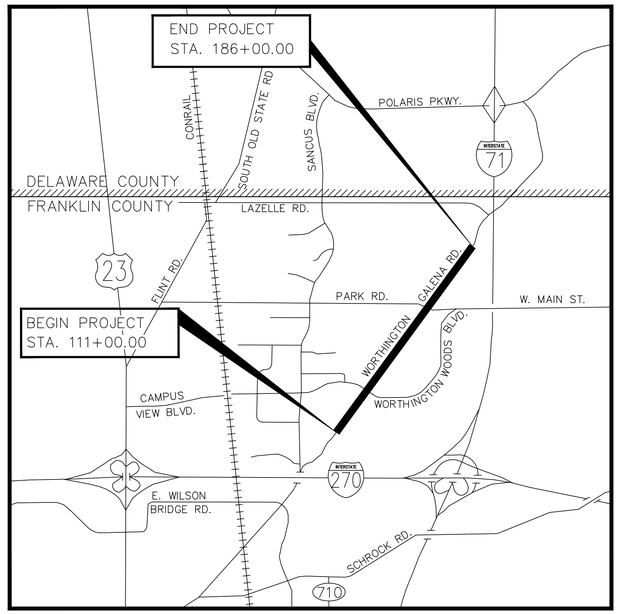
CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC SERVICE
DIVISION OF DESIGN AND CONSTRUCTION

PROJECT DESIGNATION (WHERE APPLICABLE)

IMPROVEMENTS OF NAME OF STREET

FROM XX' EAST OF XXXX ST.
TO XX' WEST OF XXXX ST.

PROJECT NAME



LOCATION MAP

P.O.B. = LATITUDE: 40° 06' 54" N LONGITUDE: 82° 59' 34" W

SCALE IN MILES

0 1/2 1 2

PORTION\S TO BE IMPROVED:

DESIGN DESIGNATION DATA (WHEN APPLICABLE)

CURRENT ADT (YYYY).....
DESIGN YEAR ADT (YYYY).....
DESIGN HOURLY VOLUME (YYYY).....
DIRECTIONAL DISTRIBUTION.....
TRUCKS (24 HOUR B&C).....
DESIGN SPEED.....
LEGAL SPEED.....
DESIGN FUNCTIONAL CLASSIFICATION.....

DESIGN EXCEPTION.....

INDEX OF SHEETS
(EXAMPLE BELOW)

TITLE SHEET _____ #
SCHEMATIC PLAN _____ #
TYPICAL SECTIONS _____ #
GENERAL NOTES _____ #
MAINTENANCE OF TRAFFIC (NOTES AND PLAN DETAILS) _____ #
GENERAL SUMMARY _____ #
CALCULATIONS _____ #
POST-CONSTRUCTION STORM WATER POLLUTION CONTROL FACILITIES _____ #
STORM WATER POLLUTION PREVENTION PLAN _____ #
* PLAN AND PROFILE (INCLUDING SUB-SUMMARIES) _____ #
CROSS SECTIONS _____ #
DETAILS _____ #
STORM SEWER PROFILES & COORDINATE DATA _____ #
WATERLINE PROFILES & COORDINATE DATA _____ #
PAVEMENT MARKING AND SIGNING _____ #
TRAFFIC SIGNAL AND TRAFFIC SIGNAL INTERCONNECT _____ #
LIGHTING _____ #
LANDSCAPING _____ #
STRUCTURES _____ #
RIGHT-OF-WAY _____ #

* NOTE: SUB-SUMMARIES SHOULD BE LOCATED ON OR IMMEDIATELY AFTER THE APPROPRIATE PLAN & PROFILE SHEET.

SHOW A COMPLETE LISTING OF ALL ANTICIPATED PLAN SECTIONS WITH EACH SUBMITTAL. IF THAT PLAN SECTION IS NOT INCLUDED WITH THE SUBMITTAL THEN LEAVE THE SHEET NUMBER BLANK.

X/X/XX = APPROVAL DATE

COLUMBUS STANDARD CONSTRUCTION DRAWINGS							
AA-S103	X/X/XX	AA-S127 X/X/XX	1441	X/X/XX	2203 X/X/XX	L-8502	X/X/XX
AA-S106	X/X/XX		2010	X/X/XX		L-7102	X/X/XX
AA-S107	X/X/XX		2160	X/X/XX			
AA-S119	X/X/XX		2166	X/X/XX			
AA-S125	X/X/XX		2201	X/X/XX			
AA-S126	X/X/XX		2202	X/X/XX			

COLUMBUS SUPPLEMENTAL SPECIFICATIONS	
SS-1100	X/X/XX
SS-1551	X/X/XX
SS-1630	X/X/XX

ODOT STANDARD CONSTRUCTION DRAWINGS			
MT-97.10	X/X/XX	TC-41.20	X/X/XX
MT-97.11	X/X/XX	TC-42.20	X/X/XX
BP-3.1	X/X/XX		

PROJECT DESCRIPTION

NORTH ARROW LOCATION

EARTH DISTURBED AREA

PLAN SCALE REFERENCE

TOTAL ESTIMATED DISTURBED AREA
PRE-CONSTRUCTION IMPERVIOUS AREA
POST-CONSTRUCTION IMPERVIOUS AREA

2012 SPECIFICATIONS

THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2012 EDITION INCLUDING ALL REVISIONS AND SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN UNLESS NOTED OTHERWISE.

CITY OF COLUMBUS APPROVALS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

DESIGN SECTION ENGINEER, DIVISION OF DESIGN AND CONSTRUCTION DATE

ADMINISTRATOR, DIVISION OF POWER DATE

ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE DATE

ADMINISTRATOR, DIVISION OF WATER DATE

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES DATE

FIRE PREVENTION BUREAU, DIVISION OF FIRE DATE

ENGINEERING SUPERVISOR, DEPARTMENT OF TECHNOLOGY DATE

DIRECTOR, DEPARTMENT OF RECREATION AND PARKS DATE

CITY ENGINEER/ADMINISTRATOR, DIVISION OF DESIGN AND CONSTRUCTION DATE

DIRECTOR, DEPARTMENT OF PUBLIC SERVICE DATE

REV NO	REVISION DESCRIPTION	SHEET(S)	INITIAL	DATE

CONSULTING ENGINEER'S FIRM LOGO

ENGINEER'S SEAL

TRAFFIC SIGNAL ENGINEER'S SEAL (IF APPLICABLE)

REGISTERED ENGINEER DATE

REGISTERED ENGINEER DATE

OHIO Utilities Protection SERVICE
Call Before You Dig
800-362-2764 or 8-1-1
www.oups.org

DURING PLAN REVIEW PHASE, PROVIDE
STAGE ___ REVIEW, DATE ___

Drawer Number to be placed on every plan sheet.
Assigned by City of Columbus Division of Design and Construction
Text height = 0.24"
Style = Arial (Bold)

Either for Page Numbering Style

XXXX - E

1/74

1/74

REVISED 11/2/15

CITY 6+6 NUMBER (ADD ODOT PID WHEN APPLICABLE)

TITLE SHEET

PROJECT NAME

INSIDE BORDER

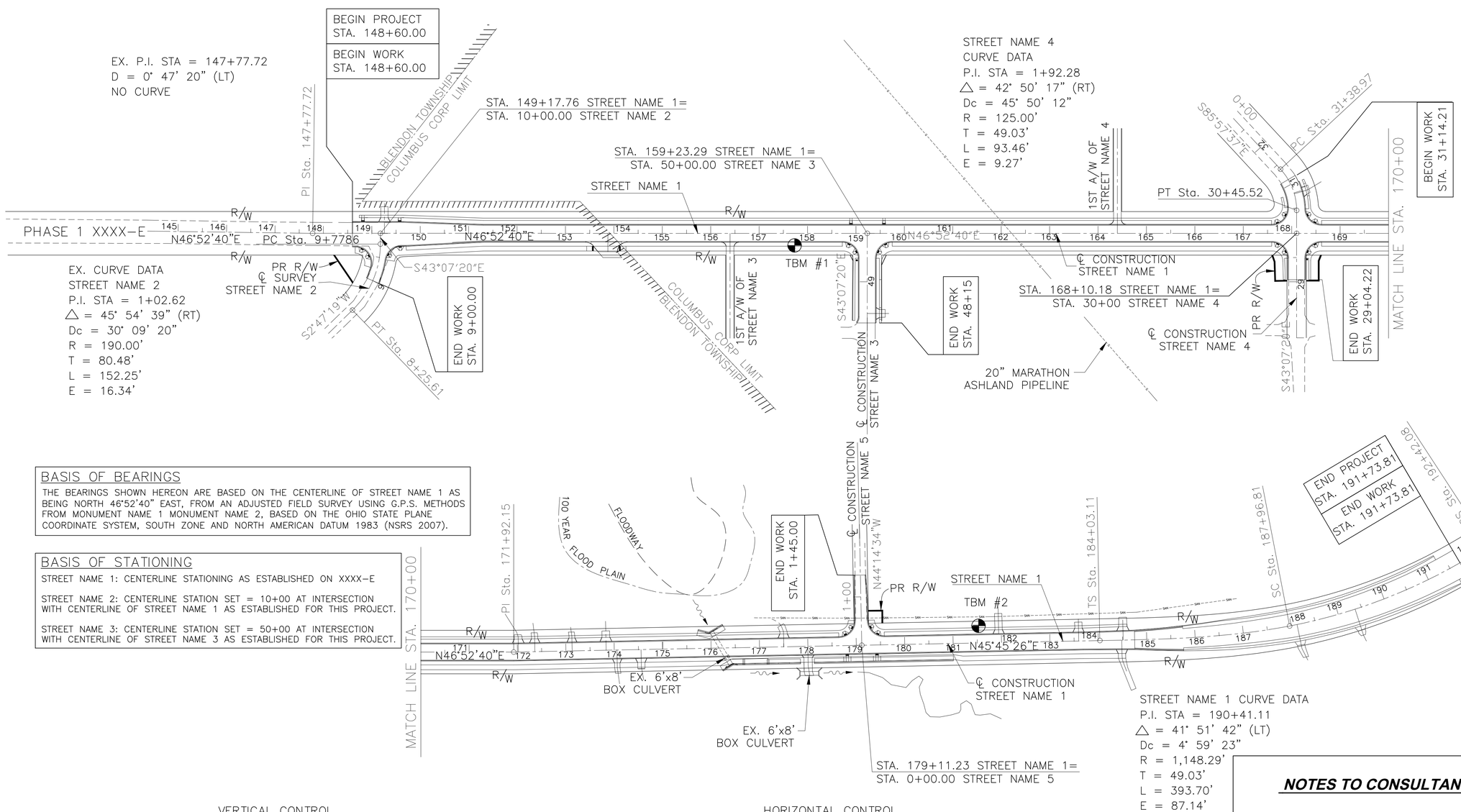
OUTSIDE EDGE OF SHEET

2" 1/2" 1/2" 1" 1/2"

INSIDE BORDER

OUTSIDE EDGE OF SHEET

STANDARD E-PLAN TITLE SHEET SIZE: 22" x 34"



BASIS OF BEARINGS

THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF STREET NAME 1 AS BEING NORTH 46°52'40" EAST, FROM AN ADJUSTED FIELD SURVEY USING G.P.S. METHODS FROM MONUMENT NAME 1 MONUMENT NAME 2, BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE AND NORTH AMERICAN DATUM 1983 (NSRS 2007).

BASIS OF STATIONING

STREET NAME 1: CENTERLINE STATIONING AS ESTABLISHED ON XXXX-E

STREET NAME 2: CENTERLINE STATION SET = 10+00 AT INTERSECTION WITH CENTERLINE OF STREET NAME 1 AS ESTABLISHED FOR THIS PROJECT.

STREET NAME 3: CENTERLINE STATION SET = 50+00 AT INTERSECTION WITH CENTERLINE OF STREET NAME 3 AS ESTABLISHED FOR THIS PROJECT.

VERTICAL CONTROL

VERTICAL CONTROL IS SET USING THE FRANKLIN COUNTY SOURCE MONUMENTS (BELOW), BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). *(DESCRIBE METHOD AND CORRECTION FACTOR)*

BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
SOURCE BENCHMARK	MONUMENT OFFICIAL NAME, DESCRIPTION	##########	##########	##########
SOURCE BENCHMARK	MONUMENT OFFICIAL NAME, DESCRIPTION	##########	##########	##########
TBM #1	NORTH FLANGE BOLT ON FIRE HYDRANT, STREET NAME, STATION & OFFSET	##########	##########	##########
TBM #2	SPIKE SET IN SOUTH SIDE OF POWER POLE. STREET NAME, STATION & OFFSET	##########	##########	##########

HORIZONTAL CONTROL

HORIZONTAL CONTROLS ARE TIED TO FRANKLIN COUNTY SURVEY SOURCE MONUMENTS (BELOW), BASED ON OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83 (NSRS 2007). *(DESCRIBE METHOD AND CORRECTION FACTORS)*

CONTROL POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
SOURCE MONUMENT	MONUMENT (OFFICIAL) NAME 1, DESCRIPTION	##########	##########	##########
SOURCE MONUMENT	MONUMENT (OFFICIAL) NAME 2, DESCRIPTION	##########	##########	##########
# 1	SPIKE SET IN SOUTH SIDE OF POWER POLE. STREET NAME, STATION & OFFSET	##########	##########	##########
# 2	SPIKE SET IN SOUTH SIDE OF POWER POLE. STREET NAME, STATION & OFFSET	##########	##########	##########

NOTES TO CONSULTANTS

1.) *SHOW PROPERTY LINES*

2.) *SHOW PROPOSED R/W LINES*

HORIZ. SCALE 50 0 25

CALCULATED

CHECKED

SCHEMATIC PLAN

PROJECT NAME

XXXX-E

X/XX

REVISED 11/7/14

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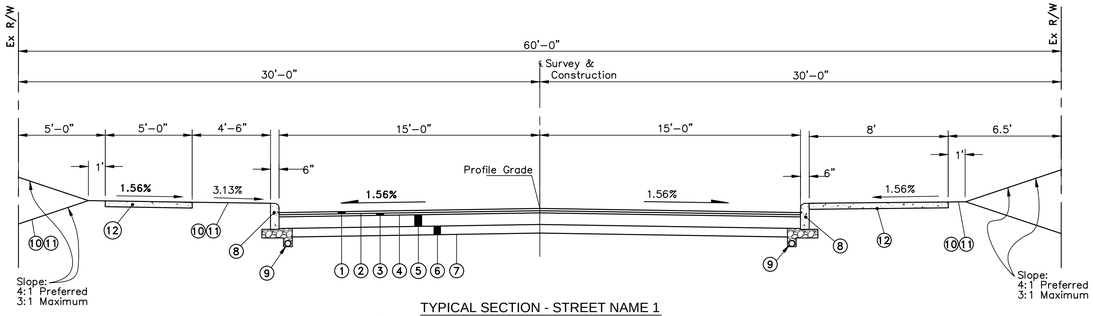
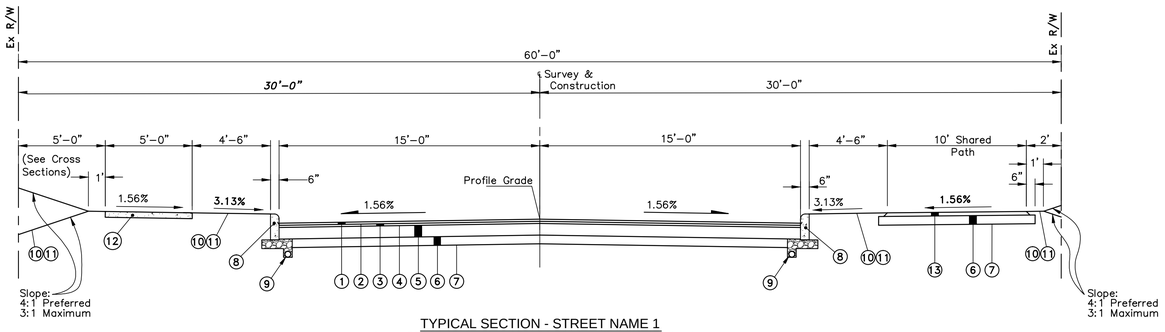
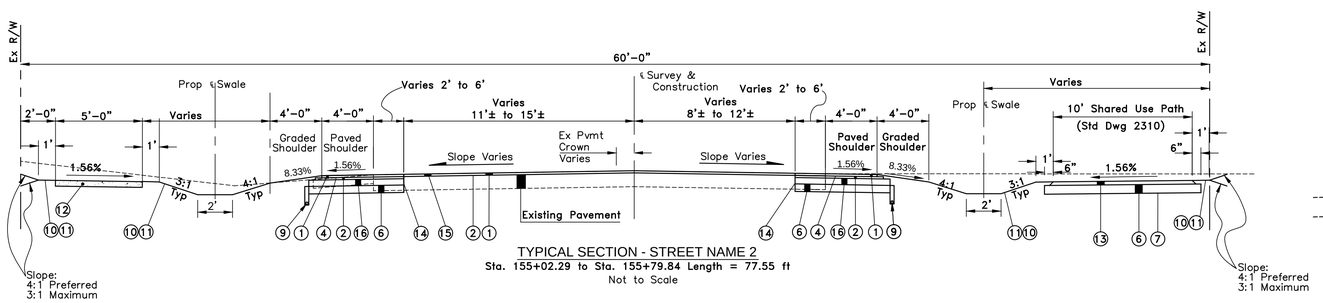


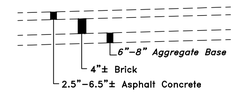
TYPICAL SECTION - STREET NAME 1
Sta. 133+90.00 to Sta. 135+13.48 Length = 123.48 ft
Not to Scale



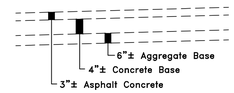
TYPICAL SECTION - STREET NAME 1
Sta. 135+13.48 to Sta. 150+01.52, Length = 1,488.04 ft
Not to Scale



TYPICAL SECTION - STREET NAME 2
Sta. 155+02.29 to Sta. 155+79.84 Length = 77.55 ft
Not to Scale



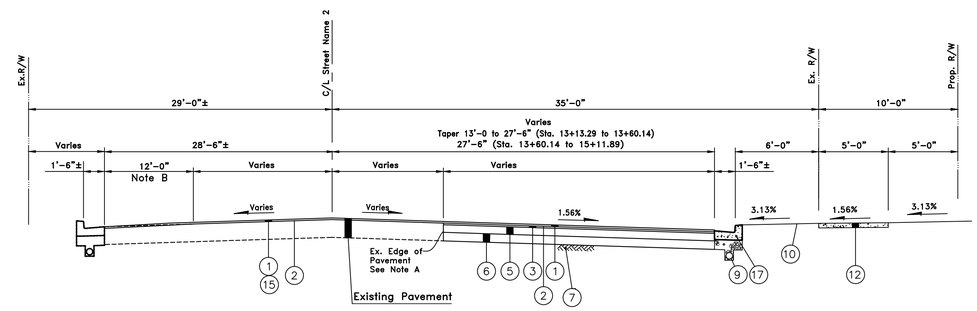
EXISTING PAVEMENT COMPOSTIION
STREET NAME 1
Sta. 133+00 to Sta. 139+50
Not to Scale



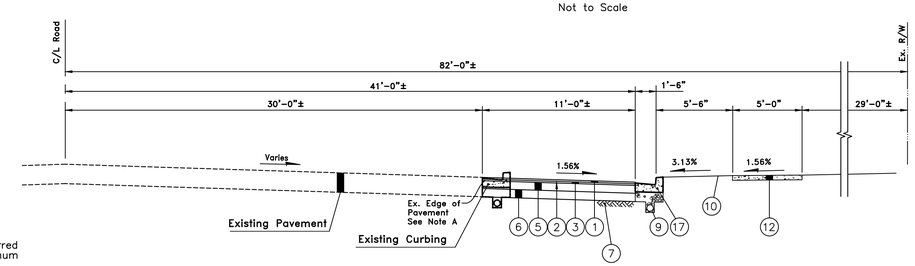
EXISTING PAVEMENT COMPOSITION
STREET NAME 1
Sta. 118+00 to Sta. 125+00
Not to Scale

LEGEND

1. Item 448 – 1.5" Asphalt Concrete Surface Course (Medium Traffic), PG64-22
2. Item 407 – Tack Coat
3. Item 448 – 1.5" Asphalt Concrete Intermediate Course (Medium Traffic), PG64-22
4. Item 407 – Tack Coat
5. Item 305 – 8" Portland Cement Concrete Base
6. Item 304 – 6" Aggregate Base
7. Item 204 – Subgrade Compaction
8. Item 609 – Curb, Straight 18"
9. Item 605 – 4" Pipe Underdrain
10. Item 659 – Seeding and Mulching
11. Item 653 – Topsoil Furnished & Placed
12. Item 608 – 4"/8" Concrete Walk
13. Item 448 – 2.5" Surface course (Medium Traffic), PG64-22
14. Item 202 Saw cut pavement full depth to sound pavement
15. Item 254 – Pavement Planing, (Varies-1-1/2" Typ.)
16. Item 301 – 6" Asphalt Concrete Base (2 Lifts)
17. Item 609 – Combination Curb & Gutter



TYPICAL SECTION - STREET NAME 3
Sta. 13+13.29 to Sta. 15+11.89, Length = 198.60 ft
Not to Scale



TYPICAL SECTION - STREET NAME 4
Sta. 16+01.42 to Sta. 16+83.67, Length = 82.25 ft
Not to Scale

NOTES TO CONSULTANTS

REFER TO TO CITY OF COLUMBUS STREET PAVEMENT DESIGN POLICIES AND STANDARD DRAWINGS. PAVEMENT DESIGN FOR WIDENING SHALL BE EQUAL OR GREATER THAN EXISTING PAVEMENT TO PROVIDE POSITIVE DRAINAGE OF SUBGRADE.

Note A:
Existing Pavement Edge to be Sawcut as Required to Provide a Smooth Clean Edge as Directed by the Engineer. (Maintain 2'-0" Min. Widening Section)

Note B:
Mill Existing Asphalt Pavement along the Existing Curb & Gutter to Provide a Minimum of 1 1/2" Depth for the Final Overlay Section.

CALCULATED
CHECKED

TYPICAL SECTIONS & DETAILS

PROJECT NAME

X
XX

XXXX-E

REVISED 3/28/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\04_01 TYPICAL SECTION.dwg (TypSect-1)

PLAN NOTES - REQUIRED [CIP]

REFERENCE SPECIFICATIONS-
THE CITY OF COLUMBUS CONSTRUCTION AND MATERIALS SPECIFICATIONS (CMSC), 2012 EDITION INCLUDING ALL REVISIONS AND SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THE PLANS UNLESS NOTED OTHERWISE.

PERMITS-
WHEN EXCAVATING WITHIN COLUMBUS PUBLIC RIGHT OF WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE- PERMIT OFFICE BETWEEN THE HOURS OF 7:30 AM AND 4:00 PM MONDAY THROUGH FRIDAY. PHONE (614) 645-7497; FAX: (614) 645-1876;
EMAIL: colspermits@columbus.gov

UTILITIES-
THE IDENTITY AND LOCATION OF EXISTING UNDERGROUND UTILITIES LOCATED IN AND AROUND THE CONSTRUCTION AREA HAVE BEEN SHOWN AND LABELED ON THE PLANS BY USING INFORMATION PROVIDED BY THE RESPECTIVE UTILITY OWNERS. THE CITY OF COLUMBUS OR THE CONSULTING ENGINEER WILL NOT ASSUME RESPONSIBILITY FOR THE ACCURACY OF LOCATION OR DEPTH OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLAN.

SUPPORT AND PROTECTION OF ALL UTILITIES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS FOR THE REPAIR AND RESTORATION OF EXISTING UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CITY OF COLUMBUS UTILITIES WILL ONLY LOCATE AND MARK MAIN LINE FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERAL AND LINES. COSTS ASSOCIATED WITH THE ABOVE WORK AND RESPONSIBILITIES SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS.

PRIOR TO EXCAVATION, THE CONTRACTOR SHALL GIVE A 48-HOUR NOTICE TO THE OHIO UTILITIES PROTECTION SERVICE (OUPS) BY CALLING (800) 362-2764. A 48-HOUR NOTICE SHALL BE GIVEN TO THE OWNERS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS WHO ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE.

LISTED BELOW ARE UTILITY COMPANIES THAT HAVE FACILITIES LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND SUBSCRIBE TO OUPS.

**********<u>***CONSULTANT:***</u> *PLEASE LIST THE NAMES, ADDRESSES, AND PHONE NUMBERS OF THE UTILITY COMPANIES WITH FACILITIES LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND SUBSCRIBE TO OUPS.***********

THE FOLLOWING CITY OF COLUMBUS UTILITIES MAY BE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT AND DO NOT SUBSCRIBE TO A REGISTERED UNDERGROUND PROTECTION SERVICE:

CITY OF COLUMBUS
DEPARTMENT OF TECHNOLOGY
CITY HALL, 90 WEST BROAD STREET
ROOM 316
COLUMBUS, OHIO 43215
CONTRACTOR LINE: (614) 645-7756
CABLE LOCATE FAX- (614) 645-6627

CITY OF COLUMBUS
DEPARTMENT OF PUBLIC SERVICE
TRAFFIC MAINTENANCE
1820 EAST 17TH AVENUE
COLUMBUS, OHIO 43219
OFFICE- (614) 645-7393
FAX- (614) 645-5967

CITY OF COLUMBUS
SUPPORT SERVICES DIVISION-COMMUNICATIONS
4211 GROVES ROAD
COLUMBUS, OH 43232
TELEPHONE- (614) 724-7047
FAX- (614) 645-6588
RADIO ROOM: (614) 724-4006

EMERGENCY PROVISIONS-
THE CONTRACTOR SHALL PROVIDE TO THE CITY OF COLUMBUS PROJECT REPRESENTATIVE A LIST OF 24 HOUR EMERGENCY TELEPHONE NUMBERS (IN WRITING) PRIOR TO THE START OF CONSTRUCTION.

SECURING EXCAVATIONS & TRENCHES FOR NON-WORKING HOURS-
EXCAVATIONS AND TRENCHES OVER 24 INCHES DEEP SHALL BE SECURELY PLATED OR BACKFILLED DURING NON-WORKING HOURS.

CONSTRUCTION LIMITS-
THE CONSTRUCTION LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE OF THESE CONSTRUCTION LIMITS.

MISCELLANEOUS WORK ITEMS-
THE CONTRACTOR SHALL PERFORM ALL ITEMS OF WORK CALLED FOR ON THE PLANS, FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED. THE COST OF THESE ITEMS SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES BID FOR THE PROJECT IMPROVEMENT.

BENCHMARKS AND SURVEY MONUMENTS-
DO NOT DISTURB ANY FRANKLIN COUNTY CERTIFIED BENCHMARKS (VERTICAL AND/OR HORIZONTAL) LOCATED WITHIN THE WORKING LIMITS OF THE PROJECT. CONTRACTOR SHALL CONTACT THE FRANKLIN COUNTY SURVEY DEPARTMENT (614) 462-3026, PRIOR TO CONSTRUCTION , TO COORDINATE THE PROPER PROCEDURES FOR THE RESETTING, RELOCATION, OR REPLACEMENT OF ANY FRANKLIN COUNTY CERTIFIED BENCHMARK OR SURVEY MONUMENT.

PLAN NOTES - INCLUDE ONLY IF APPLICABLE [CIP]

SAW CUTTING IS INCLUDED-
THE COST OF SAW CUTTING FOR THE REMOVAL OF PAVEMENT, CURB, WALKS, ETC. SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 202 WORK ITEMS. SAW CUTTING IS REQUIRED TO PROVIDE SMOOTH STRAIGHT EDGES FOR REMOVAL PURPOSES.

NEW CURB RADIUS-
INTERSECTION CORNERS OR HORIZONTAL CURVES SHALL MATCH THE EXISTING RADIUS UNLESS NOTED OTHER WISE.

COTA- SIGNS AND/OR BUS STOPS-
PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL CONTACT SENIOR SERVICE PLANNER OF THE CENTRAL OHIO TRANSIT AUTHORITY (COTA) @ PH- (614) 308-4373 OR FAX- (614) 275-5933 TO COORDINATE PROPER BUS MOVEMENTS THROUGH OR AROUND THE JOB SITE DURING THE PROJECT. THIS WILL INCLUDE, BUT NOT BE LIMITED TO, THE TEMPORARY RELOCATION OR REMOVAL OF COTA SIGNS AND/OR BUS STOP LOCATIONS.

COTA- BUS SHELTERS/PADS-
THE CONTRACTOR SHALL NOTIFY SENIOR SERVICE PLANNER OF COTA @ PH- (614) 308-4373 OR FAX- (614) 275-5933 A MINIMUM OF TWO WEEKS PRIOR TO THE REQUIRED REMOVAL OF A BUS SHELTER. COTA WILL DISASSEMBLE THE SHELTER AND THEN REINSTALL IT ONCE THE NEW CONCRETE SLAB IS IN PLACE. CONTRACTOR SHALL CONSTRUCT THE SLAB AS DIRECTED BY THE PLANS OR OTHER CONTRACT DOCUMENTS. ALL CONCRETE SLAB WORK SHALL BE PAID AS PER ITEM SPECIAL, REMOVE AND REPLACE BUS SHELTER SLAB, WITH THE CONTRACT UNIT PRICE PER EACH. THIS PAY ITEM SHALL INCLUDE ALL EXCAVATION AND REMOVAL WORK, EXPANSION JOINT MATERIAL, ITEM 608 - 6" CONCRETE WALK, AND ANY OTHER WORK AS REQUIRED OR DIRECTED BY THE ENGINEER.

GAS SERVICE VALVES ADJUSTED TO GRADE-
THE CONTRACTOR SHALL CONTACT COLUMBIA GAS (614) 460-2244 TO COORDINATE THE ADJUSTMENT OF GAS SERVICE VALVES.

COLUMBIA GAS DAMAGE PREVENTION CENTER-
FOR INFORMATION CONCERNING COLUMBIA GAS LINES OR EQUIPMENT, OR IF DAMAGE OCCURS TO GAS LINES OR EQUIPMENT, THE CONTRACTOR CAN CALL THE COLUMBIA GAS DAMAGE PREVENTION CENTER @ (614) 280-7372 OR TOLL FREE @ (866) 632-6243.

NEW PIPE CONNECTION TO AN EXISTING SEWER STRUCTURE-
WHERE THE PLANS PROVIDE FOR NEW PIPE TO BE CONNECTED TO AN EXISTING SEWER/STRUCTURE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING AN OPENING AT THE PROPER SIZE, ALIGNMENT, AND ELEVATION FOR THE CONNECTION. THE OPENING SHALL BE MADE LARGE ENOUGH TO RECEIVE AND JOIN THE PROPOSED PIPE PER CMSC ITEM 604.

NO DIRECT PAYMENT SHALL BE MADE. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 901-_ PIPE WITH TYPE _ BEDDING.

CONTINGENCY QUANTITIES-
THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK SHOWN , LABELED, OR LISTED AS 'CONTINGENCY' OR REFERENCED BY PLAN NOTE TO BE USED 'AS DIRECTED BY THE ENGINEER,' UNLESS AUTHORIZED BY THE ENGINEER, OR A REPRESENTATIVE OF THE CITY OF COLUMBUS, DIVISION OF DESIGN AND CONSTRUCTION.

CONCRETE WALKS-
ALL EXISTING CONCRETE SIDEWALKS BEING REPLACED WITH NEW CONCRETE SIDEWALKS SHALL BE REMOVED AT AN EXISTING JOINT AND REPLACED PER STANDARD DRAWING 2300. INSTALL EXPANSION JOINT WHERE NEW CONCRETE ADJOINS EXISTING SIDEWALK.

ALL EXISTING CONCRETE SIDEWALKS NOT SCHEDULED FOR REPLACEMENT BUT BEING CROSSED BY THE INSTALLATION OF TRAFFIC ITEMS, ELECTRICAL CONDUIT, PIPING, ETC. SHALL BE FULLY REMOVED AT AN EXISTING JOINT AND REPLACED PER STANDARD DRAWING 2300 UNLESS NOTED OTHERWISE.
PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 608- CONCRETE WALK.

"AS PER PLAN" NOTES - INCLUDE ONLY IF APPLICABLE [CIP]

AN 'AS PER PLAN' ITEM IS A STANDARD PAY ITEM WHOSE REQUIREMENTS NEED TO BE MODIFIED FROM THAT WHICH IS DEFINED IN THE CMSC OR SUPPLEMENTAL SPECIFICATIONS. EACH 'AS PER PLAN' ITEM SHALL HAVE A CORRESPONDING PLAN NOTE(S) OR PLAN DETAIL(S) OR COMBINATION. CLEARLY SPECIFY THE DEVIATIONS FROM THE STANDARD ITEM IF AN ITEM IS 'AS PER PLAN.' THE 'AS PER PLAN' TEXT SHALL BE INSERTED AT THE END OF THE ITEM DESCRIPTION.

EXAMPLES:

WALK REMOVED 'AS PER PLAN'
THE EXISTING SIDEWALK SHALL BE REMOVED IN ACCORDANCE WITH THE PROPOSED SIDEWALK DETAILS. REMOVAL SHALL BE IN CONFORMANCE WITH CMSC SECTION 202. REFERENCE THE PLANS FOR LOCATIONS. THICKNESS' OF EXISTING WALKS VARY FROM 4" TO 8". NO SEPARATE PAYMENT SHALL BE MADE FOR REMOVAL OF THE VARIOUS THICKNESS' OF THE WALKS ENCOUNTERED. ANY SAW CUTTING NECESSARY TO REMOVE SIDEWALKS SHALL BE INCLUDED. PAYMENT SHALL BE PER SQUARE FOOT AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, AND MATERIALS.

PAVEMENT PLANING 'AS PER PLAN'
UNDER THIS ITEM, ASPHALT SHALL BE MILLED FROM DESIGNATED STREETS TO A MINIMUM 1" DEPTH (TYPICAL 1.5"), OR AS INDICATED WITHIN THESE PLANS. PLANING DEPTHS INDICATED MAY BE ADJUSTED IN THE FIELD AT THE ENGINEER'S DISCRETION. INCREASED OR DECREASED PAVEMENT PLANING THICKNESS SHALL BE PERFORMED AT NO ADDITIONAL COST. ALL STREET PLANING SHALL MAINTAIN THE EXISTING CROWN. IF THE CROWN IS REMOVED AS A RESULT OF THE CONTRACTOR'S ERROR OR WITHOUT THE ENGINEER'S PRIOR APPROVAL, NO ADDITIONAL ASPHALT ABOVE THE PLAN QUANTITY FOR EACH SHEET SHALL BE PAID.

THE CONTRACTOR SHALL LOCATE ALL EXISTING LOOP DETECTORS PRIOR TO PLANING. IN THE EVENT A LEAD-IN CABLE IS DAMAGED, THE CONTRACTOR SHALL REPAIR. NO SEPARATE PAYMENT SHALL BE MADE FOR LOOP DETECTOR REPAIRS.

BRICKS REMOVED, SALVAGED AND DELIVERED (S.Y.)
REMOVAL: CAREFULLY REMOVE ALL BRICKS AS INDICATED FOR REMOVAL WITHOUT UNNECESSARY DAMAGE AND CLEANED FOR RE-USE. INCLUDE THE REMOVAL AND DISPOSAL OF THE SAND SETTING BED.
SALVAGE: STACK ALL UNDAMAGED AND CLEANED BRICKS ON PALLETS AND SECURELY WRAP, FASTEN OR BOX IN PALLETS. STACK BRICKS NO MORE THAN EIGHT (8) LAYERS HIGH.
DELIVERY: TRANSPORT ALL SALVAGED BRICKS TO THE CITY OF COLUMBUS DEPARTMENT OF PUBLIC SERVICE 25TH AVE. MAINTENANCE YARD. CONTRACTOR SHALL CALL THE MAINTENANCE YARD MANAGER AT (614) 645-8120 AT LEAST TWO WEEKS IN ADVANCE TO MAKE ARRANGEMENTS FOR DELIVERY. PAYMENT FOR THIS WORK SHALL BE MADE AFTER THE UNDAMAGED BRICK HAS BEEN DELIVERED. INCLUDE IN THE COST ALL WORK REQUIRED TO REMOVE, CLEAN, SALVAGE, AND DELIVER BRICK AS BID PRICE FOR ITEM 202 - BRICK REMOVED FOR STORAGE, AS PER PLAN - SY.

CALCULATED ABC
CHECKED ABC

GENERAL NOTES

PROJECT NAME

REVISED 6/25/14
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'ITEM SPECIAL' NOTES - INCLUDE ONLY IF APPLICABLE [CIP] OR [PRIV DEV]

A 'SPECIAL' ITEM IS AN ITEM THAT DOES NOT EXIST IN THE STANDARD DRAWINGS, THE CMSC, OR SUPPLEMENTAL SPECIFICATIONS. IT SHALL BE CREATED BY MEANS OF CORRESPONDING PLAN NOTES, PLAN DETAILS, OR A COMBINATION THEREOF WHICH CLEARLY SPECIFIES ALL ASPECTS OF THE ITEM. IF AN ITEM IS A 'SPECIAL' THE WORD 'SPECIAL' SHALL BE INSERTED IN THE ITEM COLUMN.

EXAMPLES:

STONE CURB TO BE REMOVED AND SALVAGED
THE CONTRACTOR SHALL REMOVE, SALVAGE, AND DELIVER TO THE CITY OF COLUMBUS THE STONE (SANDSTONE, GRANITE) CURBING FROM THE EXISTING STREETS AS DIRECTED BY THE PLAN. THE CURB SECTIONS SHOWN ON THE PLANS TO BE SALVAGED SHALL BE CAREFULLY REMOVED WITHOUT NECESSARY DAMAGE AND CLEANED FOR RE-USE. STRAIGHT CURB SECTIONS TO BE SALVAGED SHALL BE AT LEAST FOUR FEET IN LENGTH. CURVED SECTIONS OF ANY LENGTH SHALL BE SALVAGED. ALL CLEANED CURB SECTIONS SHALL BE STACKED (NO MORE THAN FOUR HIGH) AND SECURELY FASTENED OR BOXED ONTO PALLETS.

WHEN THE CURBING HAS BEEN SECURED ONTO PALLETS, THE CONTRACTOR SHALL TRANSPORT IT TO THE CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE - 25TH AVE. STREET MAINTENANCE YARD. THE CONTRACTOR SHALL CALL THE MAINTENANCE YARD MANAGER @ (614) 645-8120 AT LEAST TWO WEEKS IN ADVANCE TO MAKE ARRANGEMENTS FOR DELIVERY. PAYMENT FOR THIS WORK SHALL BE MADE AFTER THE CURBING HAS BEEN DELIVERED TO THE 25TH AVE MAINTENANCE YARD.

THE COST FOR ALL WORK REQUIRED TO REMOVE, CLEAN, SALVAGE, AND DELIVER CURBING SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL - CURB REMOVED FOR STORAGE - L.F.

ASPHALT CONCRETE PATCHING
THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER, WHEREVER AND WHENEVER IT BECOMES NECESSARY, IN THE OPINION OF THE ENGINEER, TO ALLEVIATE HAZARDOUS SITUATIONS, SUCH AS MANHOLE CASTINGS, VALVE CASTINGS, AND OTHER HAZARDOUS CONDITIONS THAT MAY EXIST. EACH SEPARATE AND DISTINCT AREA WHICH REQUIRES THIS ITEM WILL BE PAID AS
ITEM SPECIAL - ASPHALT CONCRETE PATCHING - CY.

INCLUDE PROJECT SPECIFIC NOTES FOR PLANS AS APPLICABLE

A PROJECT SPECIFIC NOTE IS A 'CUSTOM' NOTE THAT IS UNIQUE TO EACH INDIVIDUAL PLAN. IT IS TYPICALLY USED TO CONVEY INFORMATION AND/OR DETAIL CONCERNING WORK ASSOCIATED WITH THE PROJECT.

EXAMPLE:

SOILS INVESTIGATION
GEOTECHNICAL REPORTS HAVE BEEN PREPARED FOR THIS PROJECT. COPIES OF THESE REPORTS MAY BE OBTAINED FROM THE DIVISION OF DESIGN AND CONSTRUCTION.

INCLUDE OTHER AGENCY NOTES FOR PLANS AS APPLICABLE

POWER

THE DIVISION OF POWER HAS (**PRIMARY OR STREET LIGHTING OR SECONDARY**) IN THE PROJECT
AREA. THE CONTRACTOR IS HEREBY REQUIRED TO CONTACT OUPS AT 1(800) 362-2764 FORTY EIGHT HOURS PRIOR TO CONDUCTING ANY ACTIVITY WITHIN THE CONSTRUCTION AREA. THE DOP DISPATCH OFFICE NUMBER IS: (614) 645-7627 (VOICE)

ANY REQUIRED RELOCATION, SUPPORT, PROTECTION, OR ANY OTHER ACTIVITY CONCERNED WITH THE CITY'S (**STREET LIGHTING SYSTEM FOR STREET LIGHTING**) OR (**ELECTRICAL FACILITIES FOR PRIMARY**) IN THE CONSTRUCTION AREA IS TO BE PERFORMED BY THE CONTRACTOR UNDER THE DIRECTION OF DOP PERSONNEL AND AT THE EXPENSE OF THE PROJECT. DOP SHALL MAKE ALL FINAL CONNECTIONS TO DOP'S EXISTING ELECTRICAL SYSTEM AT THE EXPENSE OF THE PROJECT. THE CONTRACTOR SHALL USE MATERIAL AND MAKE REPAIRS TO A CITY OF COLUMBUS STREET LIGHTING SYSTEM BY FOLLOWING DOP'S "MATERIAL AND INSTALLATION SPECIFICATIONS" (MIS) AND THE CITY OF COLUMBUS "CONSTRUCTION AND MATERIAL SPECIFICATIONS - CITY OF COLUMBUS (CMSC). ANY NEW OR RE-INSTALLED UNDERGROUND STREET LIGHT SYSTEM SHALL REQUIRE TESTING AS REFERRED TO IN SECTION 1000.18 OF THE CMS MANUAL. THE CONTRACTOR SHALL CONFORM TO DOP'S EXISTING CONDUCTOR SAFETY POLICY AND HOLD CARD SYSTEM, MIS-95 COPIES OF WHICH ARE AVAILABLE FROM DOP IF YOU HAVE ANY QUESTIONS, CALL SCOTT WOLFE AT (614) 724-4351 OR CHRIS VOGEL AT (614) 645-6963.

IF ANY ELECTRIC FACILITY BELONGING TO DOP IS DAMAGED IN ANY MANNER BY THE CONTRACTOR, ITS AGENTS, SERVANTS, OR EMPLOYEES, AND REQUIRES EMERGENCY REPAIRS, DOP SHALL MAKE ALL NECESSARY REPAIRS, AND THE EXPENSE OF SUCH REPAIRS AND OTHER RELATED COSTS SHALL BE PAID BY THE CONTRACTOR TO THE DIVISION OF POWER, CITY OF COLUMBUS, OHIO.

WATER

LEGEND

EXISTING CONDITIONS

CENTERLINE ROAD / DRIVE
EDGE OF PAVEMENT
CURB
BERM
ASPHALT OR CONCRETE DRIVE / WALK
FENCE
GUARDRAIL
EX R/W — RIGHT-OF-WAY
P/L — PROPERTY LINE
LOT LINE
ST — STORM
SAN — SANITARY
W — WATER
DITCH
GAS — UNDERGROUND GAS
UGT — UNDERGROUND TELEPHONE
UGE — UNDERGROUND ELECTRIC
OHE — OVERHEAD ELECTRIC
EX U — UTILITY EASEMENT (SPECIFY TYPE)
TREE LINE
OHT — OVERHEAD TELEPHONE
OHFO — OVERHEAD FIBER OPTIC
SECTION LINE
RAILROAD
SIGNS
CITY OF COLUMBUS / CITY OF DUBLIN — MUNICIPAL BOUNDARY
COMBINATION CURB & GUTTER
CONCRETE WALL

STONE WALL
ROCK
TREES
BUSHES
STUMP
CONCRETE PAD
WOOD POST
POST / BOLLARD
FLAG POLE
PARKING BLOCK
BIRDBATH
HANDRAIL
STEPS
CATCH BASIN
CURB INLET MANHOLE
STORM MANHOLE
CURB INLET
BUILDING
CANOPY
TREE (TBR)

EXISTING UTILITY SYMBOLS

GUY ANCHOR
MB — MAILBOX
SIGNAL POLE
S — SANITARY MANHOLE
T — TELEPHONE PULL BOX
FIRE HYDRANT
WATER VALVE
PB — PULL BOX
TSC — TRAFFIC SIGNAL CONTROL BOX
G — GAS VALVE
CO — CLEAN OUT
W — WATER METER
T — TELEPHONE MANHOLE
LIGHT POLE
TELEPHONE ELECTRIC POLE
ELECTRIC POLE
ELECTRIC LIGHT POLE
TELEPHONE POLE

SURVEY SYMBOLS

IRON PIN/RAILROAD SPIKE FND.
M — RIGHT-OF-WAY MON. FND.
Ø MAG/PK NAIL SET
MAG/PK NAIL FND.
BENCHMARK
B-1 — SOIL BORING
RAILROAD SPIKE SET
IRON PIN SET

ABBREVIATIONS

1"WS.....1" WATER SERVICE
6"SS.....6" SANITARY SERVICE
1"GS.....1" GAS SERVICE
4"RD.....4" ROOF DRAIN
OHE.....OVERHEAD ELECTRIC
OHT.....OVERHEAD TELEPHONE
UGT.....UNDERGROUND TELEPHONE
CATV.....CABLE TELEVISION
(PA).....PREVIOUSLY ABANDONED
(DND).....DO NOT DISTURB
(TBA).....TO BE ABANDONED (SEE NOTE BELOW)
(TBR).....TO BE REMOVED
(TBRL).....TO BE RELOCATED
(RTG).....RECONSTRUCT TO GRADE
(ATG).....ADJUST TO GRADE
(ENC).....ENCROACHMENT TO REMAIN UNLESS OTHERWISE DIRECTED BY THE ENGINEER-IN-CHARGE
(ENC-TBR).....ENCROACHMENT TO BE REMOVED BY THIS PROJECT

PROPOSED LAYOUT

CONSTRUCTION CENTERLINE
CENTERLINE PROPOSED DRIVE
CONSTRUCTION LIMITS
EDGE OF PAVEMENT
CURB
BERM
WALK/SHARED-USE-PATH
R/W — RIGHT-OF-WAY
FENCE
GUARDRAIL
SAN — SANITARY
ST — STORM (18" AND SMALLER)
W — WATER
DITCH
ASPHALT OR CONCRETE DRIVE
TMP — TEMPORARY CONSTRUCTION EASEMENT
SW — SEWER EASEMENT
CH — CHANNEL EASEMENT

COMBINATION CURB & GUTTER
24" STM — STORM (24" AND LARGER)
DETECTABLE WARNING
PROPOSED FIRE HYDRANT
WATER VALVE
STM MH
SAN MH
CURB INLET
CATCH BASIN

XXXX-E

CALCULATED
CHECKED ABC

GENERAL NOTES

PROJECT NAME

XX

REVISED 10/24/14
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TEMPORARY TRAFFIC CONTROL NOTES REQUIRED FOR CAPITAL IMPROVEMENT PROJECTS

A. TEMPORARY TRAFFIC CONTROL ITEMS

1. ALL TEMPORARY TRAFFIC CONTROL (TTC) DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), (CURRENT EDITION). COPIES ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF CONTRACTS, 1980 WEST BROAD STREET, COLUMBUS, OHIO, 43216. **NOTE:** ALL DEVICES SHALL COMPLY, FOR CONDITION AND LOCATION, WITH THE CURRENT EDITION OF THE NCHRP 350 CRASH TESTING GUIDELINES.
2. CONSTRUCTION OPERATIONS SHALL **NOT** BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, INCLUDING THE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND THE REMOVAL OF CONFLICTING TRAFFIC CONTROLS, THEIR PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED. TEMPORARY PAVEMENT MARKINGS TO INCLUDE, BUT NOT LIMITED TO, CHANNELIZING LINES, EDGE LINES, AND CENTERLINES SHALL BE INSTALLED AND MAINTAINED ON ALL CONSTRUCTION OPERATIONS LASTING A MINIMUM OF 14 CALENDAR DAYS OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR THE PROJECT ENGINEER.
3. THE CONTRACTOR SHALL GIVE ADVANCE NOTIFICATION (WRITTEN AND VERBALLY) TO THE TEMPORARY TRAFFIC CONTROL COORDINATOR AT 645-6269 OR 645 5845, THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR AT 645-7283 OR 645 6016, OR pavingtheway@columbus.gov, AND THE PROJECT ENGINEER, INFORMING THEM OF ALL UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. NOTIFICATION SHALL INCLUDE, BUT NOT LIMITED TO, WHAT, WHERE, WHEN, AND HOW PEDESTRIAN AND VEHICULAR TRAFFIC WILL BE AFFECTED, AND THE TEMPORARY TRAFFIC CONTROL PROCEDURES THE CONTRACTOR IS PLANNING TO USE. THE TYPE OF TRAFFIC CHANGES SHALL DETERMINE THE LENGTH OF ADVANCE NOTIFICATION REQUIRED:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
DETOURS / ROAD CLOSURES	30-DAY NOTIFICATION PRIOR TO CLOSURE
LANE CLOSURE LASTING TWO WEEKS OR MORE	2-WEEKS
LANE CLOSURES LESS THAN TWO WEEKS	3-DAYS
LANE CLOSURE OF TWO DAYS OR LESS	1-DAY

THE COLUMBUS PAVING THE WAY PROGRAM COORDINATOR SHALL BE SUPPLIED COPIES OF ALL NOTIFICATION LETTERS SENT TO AREA BUSINESSES AND RESIDENTS.

THE COTA SENIOR SERVICE PLANNER SHALL BE CONTACTED 30 DAYS PRIOR TO ANY PLANNED CLOSURE ON ASSIGNED COTA ROUTES. ANY OTHER UNFORESEEN IMPACTS TO TRAFFIC SHALL BE IMMEDIATELY REPORTED AS THEY OCCUR.

4. ACCESS FOR PEDESTRIAN AND VEHICULAR TRAFFIC TO ALL ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND SAFE MOVEMENT OF PEDESTRIANS THROUGH, AROUND, OR DETOURED AWAY FROM THE CONSTRUCTION SITE. TRAFFIC CONTROL FOR PEDESTRIAN MOVEMENT SHALL BE AS PER FIGURES 6H-28 (TA-28) AND 6H-29 (TA-29) OF PART VI OF THE OMUTCD. ALL SIDEWALK DIVERSIONS AND TEMPORARY MID-BLOCK CROSSINGS SHALL BE PRE-APPROVED BY THE PROJECT ENGINEER OR THE TEMPORARY TRAFFIC CONTROL COORDINATOR.
6. THE CONTRACTOR SHALL MAINTAIN ALL PERMANENT TRAFFIC CONTROLS NOT IN CONFLICT WITH THE TEMPORARY TRAFFIC CONTROLS THROUGHOUT THIS PROJECT. PERMANENT TRAFFIC CONTROLS MAY BE TEMPORARILY RELOCATED OR COVERED, AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED, OR IMPROPERLY PLACED SIGNS.
7. ANY WORK DONE BY THE DEPARTMENT OF PUBLIC SERVICE, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AS RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTORS' EXPENSE.
8. THE ROADWAY SHALL **NOT** BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL THE CRITICAL PERMANENT TRAFFIC CONTROL ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS APPROVED BY THE ENGINEER, ARE INSTALLED. THE CRITICAL PERMANENT TRAFFIC CONTROL ARE **STOP, YIELD**, **ONE-WAY**, **DO NOT ENTER, AND RESTRICTED TURN SIGNS.** OTHER CRITICAL SIGNS MAY BE NOTED ON THE PLANS AS WELL. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.
9. ITEM 614 - MAINTAINING TRAFFIC, LUMP SUM

ALL COSTS THAT CONSIST OF MAINTAINING AND PROTECTING VEHICULAR AND PEDESTRIAN TRAFFIC ACCORDING TO THE LATEST EDITION OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD), AND PER THE REQUIREMENTS DESIGNATED IN THE PLAN INCLUDING ALL LAW ENFORCEMENT OFFICER (LEO) AND FLAGGER HOURS SHALL BE INCLUDED IN THE LUMP SUM ITEM 614.

IN ADDITION TO THE REQUIREMENTS HEREIN, AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, A UNIFORMED LAW ENFORCEMENT OFFICER (LEO) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC UNDER THE FOLLOWING CONDITIONS:

- WORK WITHIN A SIGNALIZED INTERSECTION, DEFINED AS THE AREA BOUNDED BY THE REAR X-WALK LINES
- WHEN FLAGGING WITHIN THE INTERSECTION OF TWO ARTERIAL ROADWAYS
- WHEN SPECIFIED IN THE MAINTENANCE OF TRAFFIC PLAN OR AS DIRECTED BY THE PROJECT ENGINEER
- WHEN SHIFTING TRAFFIC LEFT OF CENTER, THROUGH A SIGNALIZED INTERSECTION, WITHOUT SHIFTING SIGNAL HEADS

A FLAGGER SHALL BE UTILIZED TO ASSIST IN CONTROLLING TRAFFIC WHILE EQUIPMENT IS ENTERING OR EXITING AN INTERSECTION OR WORK ZONE. THE CONTRACTOR MAY UTILIZE HIS OWN OR LEO UNDER PAY ITEM 614 MAINTAINING TRAFFIC, LUMP SUM.

FLAGGERS AND LEO'S SHALL BE EQUIPPED ACCORDING TO THE STANDARDS FOR FLAGGING TRAFFIC CONTAINED IN THE OMUTCD. FLAGGING OPERATIONS PERFORMED BY LEO'S OR DESIGNATED FLAGGERS SHALL ONLY BE PERMITTED AS LONG AS ALL TRAFFIC CONTROL IS IN PLACE ACCORDING TO FIGURE 6H-10 (TA-10) IN THE OHIO MANUAL. PATROL CARS SHALL **NOT** BE USED IN FLAGGING OPERATIONS.

IF THE CONTRACTOR WISHES TO UTILIZE LEOS' FOR TRAFFIC CONTROL OTHER THAN FOR THE REQUIRED IN THE PLANS, THEY DO SO AT THEIR OWN EXPENSE. THE CONTRACTOR SHALL MAKE ARRANGEMENT THROUGH THE COLUMBUS POLICE DIVISION AT (614) 645-4795.

LEO'S SHALL BE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH EMPLOYED BY THE CONTRACTOR, THE CITY REPRESENTATIVE SHALL HAVE CONTROL OVER THEIR PLACEMENT.LEO'S SHALL NOT HAVE THE AUTHORITY TO CHANGE, EDIT, OR MODIFY ANT MAINTENANCE OF TRAFFIC SCHEME WITHOUT THE PERMISSION OF THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER UNLESS AN EMERGENCY DEVELOPS.

IF A SAFETY HAZARD DEVELOPS, A LEO MAY BE ASSIGNED BY THE COLUMBUS SAFETY AND SERVICES DIRECTOR AT THE CONTRACTOR'S EXPENSE.

ITEM 614 - LAW ENFORCEMENT OFFICER (LEO) WITH PATROL CAR, AS PER PLAN

IN ADDITION TO THE LEO AND FLAGGER HOURS INCLUDED IN ITEM 614 MAINTAINING TRAFFIC, LUMP SUM; THE FOLLOWING QUANTITIES HAVE BEEN CARRIED FORWARD TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER OR AN ACCEPTABLE REPRESENTATIVE OF THE CITY OF COLUMBUS. THE OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL BE PAID FOR THIS BID ITEM ONLY IF DIRECTED BY THE ENGINEER.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR, AS PER PLAN - _____ HOURS

ITEM 614 - LAW ENFORCEMENT OFFICER (LEO) WITHOUT PATROL CAR, AS PER PLAN

IN ADDITION TO LEO AND FLAGGER HOURS INCLUDED IN THE ITEM 614 MAINTAINING TRAFFIC, LUMP SUM; THE FOLLOWING QUANTITIES HAVE BEEN CARRIED FORWARD THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER OR AN ACCEPTABLE REPRESENTATIVE OF THE CITY OF COLUMBUS. THE CONTRACTOR SHALL BE PAID FOR THIS BID ITEM ONLY IF DIRECTED BY THE ENGINEER.

ITEM 614, LAW ENFORCEMENT OFFICER WITHOUT PATROL CAR, AS PER PLAN - _____ HOURS

TEMPORARY TRAFFIC CONTROL NOTES IF APPLICABLE FOR CAPITAL IMPROVEMENT PROJECTS

B. TEMPORARY TRAFFIC CONTROL ITEMS

1. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE INSTALLED A MINIMUM OF 7 DAYS PRIOR TO CLOSURE OF ROADWAY. THE MESSAGE SHALL ADVISE THE MOTORISTS OF THE DATES, TIMES, AND DURATION OF THE CLOSURE. THE PCMS SHALL REMAIN IN PLACE FOR 7 DAYS AFTER THE START OF THE CLOSURE, OR AS DIRECTED BY THE TEMPORARY TRAFFIC CONTROL COORDINATOR OR PROJECT ENGINEER.
2. A TTC PLAN (TTCP) INCLUDING PEDESTRIAN CONTROL SHALL BE SUBMITTED TO THE TTC COORDINATOR AT 645-6269 OR 645-5845 AT THE PRE-CONSTRUCTION MEETING OR A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE BEGINNING OF WORK. COPIES OF THE APPROVED TTCP SHALL BE GIVEN TO THE PROJECT ENGINEER AND KEPT ON SITE ALONG WITH THE STREET CLOSURE / OCCUPANCY PERMIT.
3. TYPE C STEADY-BURN OR TYPE D 360-DEGREE STEADY BURN WARNING LIGHTS SHALL BE REQUIRED ON ALL BARRICADES, DRUMS, AND SIMILAR TRAFFIC CONTROL DEVICES IN USE AT NIGHT. ONLY 42" REFLECTORIZED CHANNELIZING DEVICES (CONES) SHALL BE PERMITTED FOR NIGHTTIME WORK WITH THE APPROVAL OF THE TTC COORDINATOR AT 645-6269 OR 645-5845 PER ODOT STANDARDS.
4. A FLASHING ARROW PANEL (48" x 96"-TYPE C) SHALL BE USED IN LANE CLOSURES AS PER THE OHIO MANUAL (OMUTCD).
5. ALL TRENCHES WITHIN THE ROAD RIGHT OF WAY SHALL BE BACKFILLED OR SECURELY PLATED PER (CITY OF COLUMBUS GENERAL POLICY ON STEEL PLATE USAGE DATES 11/15/2006 AND 2013 STD. DWG. 1441) DURING NON-WORKING HOURS.
6. ALL EXISTING TRAFFIC LANES SHALL BE OPEN TO TRAFFIC AT ALL TIMES ON:_____.
7. ALL TRAFFIC LANES SHALL BE FULLY OPEN TO TRAFFIC FROM 6:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 6:00 P.M., OR 6:00 A.M. TO 9:00 A.M. AND 3:00 P.M. TO 6:00 P.M. IN THE COLUMBUS BUSINESS DISTRICT AREA, MONDAY THROUGH FRIDAY ON _____. ____ LANE (S) MAY BE CLOSED TO TRAFFIC DURING WORKING HOURS.
8. ONE-WAY _____ LANE (S) OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON _____.
9. TWO-WAY TWO-LANE (ONE-LANE EACH DIRECTION) SHALL BE MAINTAINED AT ALL TIMES BY USE OF EXISTING, PROPOSED, OR TEMPORARY PAVEMENT PER FIGURE 6H-32 TYPICAL APPLICATION 32 (TA-32) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
10. TWO-WAY ONE-LANE TRAFFIC MAY BE MAINTAIN DURING CONSTRUCTION OPERATIONS ON _____, PER FIGURE 6H-10 (TA-10) OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
11. _____ MAY BE CLOSED BETWEEN _____ AND _____ FOR A MAXIMUM OF _____ HOUR (S)/ DAY (S) BETWEEN THE HOURS OF _____ AND ____ PER FIGURE 6H-20 (TA-20) OF THE OMUTCD AND/OR APPROVED BY THE DEPARTMENT OF PUBLIC SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN PROVIDING A DETOUR INCLUDING THE REMOVAL AND REINSTALLATION OF ANY CONFLICTING TRAFFIC CONTROL AND/OR ANY NECESSARY TRAFFIC SIGNAL WORK.
12. A TEMPORARY DIVERSION SHALL BE PROVIDED AND MAINTAINED IN GOOD CONDITION ON _____ DURING THE PERIOD OF WORK. ALL SUCH DIVERSIONS SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL of UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).
13. THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE OR COVER ALL PARKING METER HEADS PUT OUT OF SERVICE BY THIS CONTRACT. THERE IS A $60.00 CHARGE FOR THE REMOVAL AND RE-INSTALLATION OF EACH METER. IN ADDITION, A DAILY METER FEE WILL BE CHARGED FOR ALL ENFORCEMENT HOURS FOR EACH METER TAKEN OUT OF SERVICE. THESE CHARGES WILL BE COLLECTED FROM THE CONTRACTOR IN ADVANCE WITH THE ISSUANCE OF THE STREET OCCUPANCY / EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. (645-7497) THE MANAGER OF PARKING SERVICES SUPPORT (645-7890) SHALL BE NOTIFIED A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. SUN.,& HOLIDAYS) PRIOR TO THE BEGINNING OF WORK. CALL 645-8376 IF UNABLE TO MAKE CONTACT THROUGH THE PRIOR PHONE NUMBER.
14. TEMPORARY "EMERGENCY NO PARKING" SIGNS SHALL BE INSTALLED AT 50' INTERVALS C/C MINIMUM BY USE OF ANY OF THE FOLLOWING ITEMS: EXISTING SIGN POSTS, EXISTING UTILITY POLES, DRUMS AND/OR 42"CONES AND REMOVED BY THE CONTRACTOR IN AREAS WITH NO PARKING METERS. THE SIGNS SHALL HAVE THE INSTALLATION DATE, WORKING DATES, AND HOURS OF RESTRICTION SHOWN ON EACH SIGN. THESE SIGNS CAN BE OBTAINED FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. THE POLICE DIVISION REQUIRES THE "EMERGENCY NO PARKING" SIGNS TO BE POSTED A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY VEHICLES BEING TOWED. WITHIN TWENTY-FOUR (24) HOURS OF POSTING, THE CONTRACTOR SHALL SUPPLY THE DEPARTMENT OF PUBLIC SERVICE WITH A WRITTEN RECORD OF POSTED LOCATIONS (FAX 645-3298).
15. TRAFFIC OPERATIONS' PERSONNEL SHALL LOCATE AND MARK ALL UNDERGROUND TRAFFIC CONTROL CABLES. THE TRAFFIC OPERATIONS SHOP SHALL BE NOTIFIED 645-7393 (FAX 645-5967) AT LEAST FORTY-EIGHT (48) HOURS (EXCLUDING SATURDAY & SUNDAY) PRIOR TO THE BEGINNING OF ANY WORK WITH 450 FEET OF ANY SIGNALIZED INTERSECTION (S) OR WITHIN ANY POSTED AREA WHERE THE DEPARTMENT HAS UNDERGROUND CABLE. THE SIGNAL OPERATION ENGINEER (645-6418) SHALL BE NOTIFIED SIX (6) WEEKS IN ADVANCE FOR SIGNAL REVISION OR POLE RELOCATIONS.
16. NO EXCAVATION SHALL BE MADE WITHIN FIVE (5) FEET OF ANY FOUNDATION THAT SUPPORTS SIGNAL POLES, TRAFFIC SIGNAL DISPLAYS OR SIGNS BY MAST ARMS OR SIGNAL SPAN. EXCAVATION WITHIN EIGHT (8) FEET, BUT MORE THAN FIVE (5) FEET SHALL REQUIRE ADDITIONAL SUPPORT (DOWN GUY, HEAD GUY, BASE GUY, ETC.). THE CONTRACTOR SHALL CONTACT SIGNAL OPERATION PERSONNEL AT 645-0423 (CELL 419-4501) AT LEAST FORTY-EIGHT 48 HOURS (EXCLUDING SATURDAY & SUNDAY) PRIOR TO BEGINNING OF SUCH EXCAVATION SO THAT THE CITY CAN APPROVE THE STABILIZATION SETUP BY THE CONTRACTOR. IF UNABLE TO MAKE CONTACT THROUGH ABOVE NUMBERS, CALL 645-7393. STABILIZATION WILL BE DONE BY THE CONTRACTOR AT THE OWNERS' / CONTRACTING AGENCY'S EXPENSE.
17. SIGNAL CONDUIT CLEARANCE FROM ADJACENT UTILITIES SHALL BE MAINTAINED AT ALL TIMES, THE SIGNAL CONDUIT CLEARANCE TABLE CAN BE FOUND IN THE CITY OF COLUMBUS TRAFFIC SIGNAL DESIGN MANUAL TABLE 13.2, MINIMUM CONDUIT CLEARANCE.
18. WHEN ANY TRAFFIC CONTROL DEVICE, CONDUIT, OR CABLE IS DAMAGED, THE CONTRACTOR SHALL NOTIFY SIGNAL OPERATION PERSONNEL AT 645-0423 (CELL 451-4501) BETWEEN 7:00 A.M. AND 4:00 P.M., MONDAY THROUGH FRIDAY. IF UNABLE TO MAKE CONTACT THROUGH THE OTHER NUMBERS, CALL 645-7393.
19. THE ROADWAY OR ANY SECTION OF ROADWAY SHALL NOT BE OPENED TO NON-CONSTRUCTION TRAFFIC UNTIL ALL TEMPORARY , NON-REFLECTIVE, BLACKOUT TAPE HAS BEEN COMPLETELY REMOVED FROM NON-CONFLICTING PERMANENT PAVEMENT MARKINGS FOR THAT AREA OF THE ROADWAY, OR UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER. THIS IS SUPPLEMENTAL TO THE CMS-614.11F, AND SHALL BE PAID FOR THROUGH THE 614-LUMP SUM.
20. WHENEVER YELLOW CENTERLINES OR TURN-LANE LINE ARE PAVED OVER, REMOVED, OR OTHERWISE UNSERVICEABLE, THE CONTRACTOR SHALL INSTALL CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS). TEMPORARY PAINT SHALL BE USED ON ALL MILLED SURFACES. TEMPORARY TAPE SHALL BE USED ON ALL FINAL COURSES OF ASPHALT. PAINT OR TAPE MAY BE USED ON ALL INTERMEDIATE COURSES OF ASPHALT. IF APPROVED BY THE ENGINEER, DRUMS WITH STEADY BURNING TYPE C OR TYPE D 360 DEGREE WARNING LIGHTS AND "KEEP RIGHT" SIGNS MAY BE SUBSTITUTED FOR CENTERLINE MARKINGS.
21. CLASS II TEMPORARY STRIPING (MINIMUM 4' LONG SEGMENTS) SHALL BE AS PER ITEM 614-WORK ZONE PAVEMENT MARKINGS AND SHALL BE PLACED WITH ONE (1) FOOT LONGITUDINAL TOLERANCE OF THE PERMANENT STRIPE (S). ALL STRIPING NOT TO WITHIN ONE (1) FOOT TOLERANCE SHALL BE REMOVED AND REPLACED IN THE PROPER LOCATION BY THE CONTRACTOR. CLASS II TEMPORARY STRIPING SHALL BE OF THE APPROPRIATE COLOR AND SPACED AT A MAXIMUM OF FORTY (40) FEET CENTER TO CENTER.

EXISTING PERMANENT TRAFFIC CONTROL NOTES REQUIRED FOR CAPITAL IMPROVEMENT PROJECTS

C. EXISTING PERMANENT TRAFFIC CONTROL ITEMS

1. ANY WORK DONE BY THE DEPARTMENT OF PUBLIC SERVICE, INCLUDING INSTALLATION, RELOCATION, REMOVAL AND/OR REPLACEMENT OF PERMANENT TRAFFIC CONTROL DEVICES AS A RESULT OF WORK DONE BY THE CONTRACTOR OR AS A RESULT OF NEGLIGENCE OF THE CONTRACTOR, SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING CONSTRUCTION. PERMANENT TRAFFIC CONTROL NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY.
3. THE CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKERS (RPM) SHOWN IN CONFLICT, REMOVED DUE TO CONSTRUCTION OR MAINTENANCE OF TRAFFIC SET UP, DESTROYED, OR RENDERED UNSERVICEABLE BY THE PROJECT ENGINEER OR THE PUBLIC SERVICE PAVEMENT MARKING MANAGER. ALL PAVING MARKING MATERIALS SHALL BE REPLACED **IN-LIKE KIND** IF NOT SHOWN IN THE PLAN OR PERMIT INCLUDING RAISED PAVEMENT MARKERS. ALL PAVEMENT MARKINGS SHALL BE REPLACED IN FULL . NO PARTIAL LENGTH OR SECTIONS OF PAVEMENT MARKINGS SHALL BE REPLACED WITHOUT REMOVING THE ENTIRE MARKING BY USE OF THE WATER BLAST METHOD. REMOVAL BY ABRASIVE WHEEL GRINDING SHALL ONLY BE APPROVED BY PUBLIC SERVICE PAVEMENT MARKING MANAGER.

EXISTING PERMANENT TRAFFIC CONTROL NOTES IF APPLICABLE FOR CAPITAL IMPROVEMENT PROJECTS

D. EXISTING PERMANENT TRAFFIC CONTROL ITEMS

1. ALL OVERHEAD CABLE, DOWN GUYS OR BACK GUYS SHALL NOT BLOCK ANY PORTION OF A TRAFFIC SIGNAL, TRAFFIC CONTROL SIGN, OR OTHER TRAFFIC CONTROL DEVICE SUCH THAT VISIBILITY OR OPERATION OF THE TRAFFIC CONTROL DEVICE IS IMPAIRED.
2. ALL PERMANENT PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS AS SHOWN ON THIS PLAN SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROJECTS EXPENSE. THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT. & SUN.) PRIOR TO THE INSTALLATION OF PERMANENT MARKING TO INSPECT AND APPROVE THE PAVEMENT MARKING LAYOUT PRIOR TO PLACING THE PERMANENT MARKINGS.
3. PERMANENT STRIPING OR CLASS I TEMPORARY STRIPING SHALL BE INSTALLED NO LATER THAN FOURTEEN (14) CALENDAR DAYS AFTER THE FINAL PAVING COURSE IS COMPLETED. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE STRIPING CONTRACTOR TO INSURE THE PERMANENT STRIPING IS INSTALLED WITHIN THE FOURTEEN (14) CALENDAR DAY LIMIT.
4. IF THE DEPARTMENT OF PUBLIC SERVICE IS TO INSTALL PERMANENT STRIPING, THE PROJECT ENGINEER SHALL BE NOTIFIED TO DIRECT APPROPRIATE PERSONNEL A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE APPLICATION OF THE FINAL COURSE OF PAVEMENT.

EXISTING PERMANENT TRAFFIC CONTROL ITEMS CONTINUED, SEE NOTE #5 SHEET 2

HORIZ. SCALE 50 0 25 50

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC NOTES

PROJECT NAME

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REVISED 11/6/14

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EXISTING PERMANENT TRAFFIC CONTROL NOTES IF APPLICABLE FOR CAPITAL IMPROVEMENT PROJECTS, CONTINUED.

D. EXISTING PERMANENT TRAFFIC CONTROL ITEMS

NOTE #5 INSTRUCTIONS: DO NOT PLACE IN PLAN

INSERT NOTE #5 WHEN; WORKING NEAR A LOCATION WHERE TRAFFIC LOOP DETECTION AND/OR ITS LEAD IN CABLES COULD BE INADVERTENTLY DAMAGED. CONTINGENCY ITEMS AND ESTIMATED QUANTITIES SHALL ONLY BE INCLUDED AS DIRECTED BY THE PLAN REVIEWER. LOOP DETECTION AND/OR ITS LEAD IN CABLES BEING DESTROYED OR ELSE RENDERED INOPERATIVE DUE TO TYPICAL CONSTRUCTION ACTIVITIES SHALL BE QUANTIFIED IN THE GENERAL SUMMARY AND SIGNAL SUMMARY AND SHOWN AS REMOVED AND REPLACED. NOTE # 5 IS NOT REQUIRED FOR THIS OPERATION UNLESS THE AFOREMENTIONED REQUIREMENT IS MET.

5. AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD IN CABLES THE CONTRACTOR SHALL REPLACE THEM. AT ANY LOCATION WHERE DETECTION IS CHANGED FROM MAG PROBE UNITS TO LOOP, THE CONTRACTOR SHALL REPLACE THE PROBE LEAD-IN WITH LOOP LEAD-IN CABLE. ALL REPAIRS TO DETECTION SHALL BE COMPLETED WITHIN 21 DAYS FROM DAMAGE TO DETECTION ON A PER INTERSECTION BASIS. IF THE 21 DAY REPAIR PERIOD CANNOT BE SATISFIED AT ANY LOCATION WHERE THE CONTRACTOR DAMAGES DETECTORS AND/OR THEIR LEAD-IN CABLES, THE CONTRACTOR, AT THE DIRECTION OF SIGNAL OPERATION PERSONNEL, MAY BE REQUIRED TO INSTALL A VERSICAM FLEX CAMERA SYSTEM OR TEMPORARY LOOP DETECTION. ANY CONTRACTOR FAILING TO COMPLY WITH THESE GUIDELINES SHALL BE SUBJECT TO PENALTY TO THE SUM OF $100.00 PER DAY FOR EACH DAY BEYOND THE 21 DAY PERIOD ON A PER INTERSECTION BASIS, UNTIL CONDITIONS ARE MET TO THE SATISFACTION OF SIGNAL OPERATIONS PERSONNEL. THIS PENALTY DEDUCTION SHALL BE SPECIFIC TO EACH SIGNALIZED INTERSECTION EFFECTED BY THIS PROJECT AND SEPARATE FROM ANY LIQUIDATED DAMAGES FOR THE PROJECT AS A WHOLE. THE WORK TO INSTALL THE DETECTION SHALL CONFORM TO ODOT STANDARD DRAWING TC-82.10 (DATED 4/29/02 OR LATER) AND TO THE CURRENT STATE OF OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS WITH THE FOLLOWING PROVISIONS.

A) THE CONTRACTOR SHALL PROVIDE THE DEPARTMENT OF PUBLIC SERVICE 'S INSPECTOR, PRIOR TO THE COMMENCEMENT OF WORK, THE IMSA (INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION) CERTIFICATION PAPERS FOR ALL SIGNAL TECHNICIANS WORKING ON THIS PROJECT.

B) LOCATIONS OF THE REPLACEMENT DETECTION SHALL BE FIELD MARKED OR DIMENSIONED DRAWINGS SHALL BE SUBMITTED TO THE CONSTRUCTION SECTION BY DEPARTMENT OF PUBLIC SERVICE PERSONNEL. LOCATION OF FINAL PAVEMENT MARKINGS OR THE MARKINGS THEMSELVES SHALL BE CLEARLY INDICATED ON THE ASPHALT PRIOR TO DETECTOR LOCATIONS BEING MARKED. THE CONTRACTOR SHALL LAYOUT THE LOOPS ON THE PAVEMENT IF DRAWINGS ARE SUBMITTED. IF DRAWINGS HAVE NOT BEEN PROVIDED, CONTACT SIGNAL OPERATIONS PERSONNEL AT 645-0423 (CELL 419-4501) AT LEAST TWO WORKING DAYS PRIOR TO NEEDING THE LOCATION MARKED. IF UNABLE TO MAKE CONTACT THROUGH THE ABOVE NUMBERS, CALL 645-7393.

C) THE SAW SLOT DEPTH FOR LOOP WIRE INSTALLATION SHALL BE FOUR (4) INCHES WITH SIX (6) INCHES AT THE CONDUIT ENTRANCE. IF ADVERSE PAVEMENT CONDITIONS WARRANT, DEPTH MAY BE INCREASED TO SIX (6) INCHES THROUGHOUT AND SHALL BE DETERMINED BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR.

D) EACH LOOP SHALL HAVE ITS OWN CONDUIT FROM EDGE OF PAVEMENT TO PULL BOX UNLESS SPECIFIED OTHERWISE BY THE DEPARTMENT OF PUBLIC SERVICE INSPECTOR.

E) THE PULLBOX ASSEMBLY SHALL BE RATED AS MEDIUM TO HEAVY DUTY, TO BE INSTALLED IN CONCRETE WALKWAYS, AND HAVE ALL STAINLESS STEEL HARDWARE. THE PULLBOX COVER SHALL HAVE THE WORD "TRAFFIC" ON IT. THE COVER SHALL BE BOLTED TO THE BOX AND SHALL BE EITHER POLYMER CONCRETE OR STEEL PLATE. THE COVER PLUS HOUSING AS A UNIT SHALL BE RATED TO WITHSTAND A MINIMUM OF 20,000LB. STATIC LOAD OVER A 10"x 10" AREA AS PER ASTM-C857. THE BOX DEPTH SHALL BE 18 INCHES MINIMUM TO 30 INCHES MAXIMUM. IF THE PROJECT DOES NOT SPECIFY 713.08 CONCRETE PULL BOXES, THE SUPPLIED ASSEMBLIES SHALL BE AS FOLLOWS: CDR SYSTEMS MODEL SA32-1015-18, OR SYNERTECH MODEL 11"x 18". SIX (6) INCHES OF #4 AGGREGATE SHALL BE PLACED AT THE BOTTOM OF THE PULLBOX. NO CONDUIT SHALL PROTRUDE MORE THAN THREE (3) INCHES INSIDE THE PULLBOX. CONDUIT ELLS OR EXTENSIONS MAY BE USED TO ALIGN THE CONDUIT WITH THE HOUSING. THE COST FOR THE EXTENSIONS OR ELLS IF NEEDED SHALL BE INCIDENTAL TO THE PER UNIT PRICE.

F) WHEN A PULLBOX IS NOT USED, THE SOLDERED SPLICE SHALL BE MADE IN AN ANCHOR BASE STRAIN POLE OR CONDUIT RISER SPECIFIED BY THE DEPARTMENT OF PUBLIC SERVICE 'S REPRESENTATIVE, EXCEPT WHERE A CONTROLLER CABINET IS MOUNTED ON THAT POLE IN WHICH CASE THE LOOP WIRE SHALL BE ROUTED DIRECTLY INTO THE CABINET.

G) THE CONTRACTOR SHALL NOT MAKE ANY WIRING CONNECTIONS OR ADJUSTMENTS INSIDE THE CONTROL CABINET. WHEN SUCH CONNECTIONS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE TRAFFIC OPERATIONS SHOP 645-7393, MON.-FRI., 8AM-4PM, TO SCHEDULE CITY FORCES FOR MAKING THE ACTUAL CONNECTIONS. THE CONTRACTOR SHALL BE AVAILABLE AT THE AGREED TIME. THE CONTRACTOR WILL BE BILLED FOR ANY TIME CITY FORCES ARE REQUIRED TO WAIT FOR THE CONTRACTORS' WORK TO BE COMPLETED.

H) CONDUIT PLACED IN "RIGHT OF WAY" AREAS BEARING NO TRAFFIC FOR DETECTOR LEAD IN SHALL BE ODOT ITEM 725.051, ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, LATEST EDITION. CONDUIT PLACED UNDER A ROADWAY OR IN AREAS THAT MAY BEAR TRAFFIC SHALL BE ODOT ITEM 725.04 (SIZES AND TYPE TO BE DETERMINED BY THE DEPARTMENT OF PUBLIC SERVICE 'S REPRESENTATIVE. ALL CONDUITS SHALL BE PLACED AT A MINIMUM DEPTH OF 24 INCHES.

I) LOOP WIRE SHALL BE IDENTIFIED WITH A PLASTIC TAG (WBLT, EBRT, ECT.) AT THE SPLICE POINT OR AT THE ENTRANCE TO THE CABINET IF LEAD-IN CABLE IS NOT USED.

J) THE ITEMS AND ESTIMATED QUANTITIES FOR THE REPLACEMENT OF THE DEPARTMENT OF PUBLIC SERVICE'S DETECTION ITEMS SHALL BE INCLUDED IN THESE PLANS WHEN DIRECTED BY THE PLAN REVIEWER. THESE ESTIMATES ARE FOR THE PURPOSE OF BIDDING THE PROJECT. THE FOLLOWING LIST OF THE ITEMS AND QUANTITIES PROJECTED FOR USE IN DETECTOR REPLACEMENT FOR THIS PROJECT:

ITEM	QUAINT	UNIT	ITEM DESCRIPTION
202		SF	WALK REMOVED
608		SF	4" CONCRETE WALK
632		LF	CONDUIT RISER, 1 OR 2 INCH DIA.
625		LF	CONDUIT 1, 1 ½, OR 2 INCH DIA.
625		LF	TRENCH
625		EACH	PULL BOX, AS PER PLAN
632		EACH	DETECTOR LOOP
632		LF	LOOP DETECTOR LEAD-IN CABLE
632		LF	LASH / UNLASH CABLE

THE CONTRACTOR SHALL NOTIFY SIGNAL OPERATIONS' PERSONNEL AT 645-0423 (CELL 419-4501) AFTER ALL LOOPS HAVE BEEN INSTALLED AT EACH INTERSECTION. IF UNABLE TO MAKE CONTACT THROUGH THE ABOVE NUMBER CALL, 645-7393. THE DEPARTMENT OF PUBLIC SERVICE SHALL INSPECT ALL SENSORS AND TEST AS NECESSARY. THE CONTRACTOR SHALL REPLACE ALL LOOPS NOT MEETING SPECIFICATIONS.

EXISITNG PERMANENT TRAFFIC CONTROL NOTES ITEM SPECIAL FOR CAPITAL IMPROVEMENT PROJECTS

E. ITEM SPECIAL- PARKING METER POSTS REMOVED OR POST CORES

THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC SERVICE REGARDING PARKING METERS TO BE REMOVED, METERS TO BE RELOCATED, AND NEW METER INSTALLATION.

THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE ANY METER HEADS SPECIFIED TO BE REMOVED, ROTATE METER HEADS SPECIFIED TO BE ROTATED; AND INSTALL METER HEADS AND POSTS FOR ANY NEW METERS SPECIFIED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE THE POST AFTER THE METER HEAD IS REMOVED BY DPS. IF A NEW METER IS PLANNED IN A PAVED OR CONCRETE AREA, THE CONTRACTOR SHALL COORDINATE WITH THE DEPARTMENT OF PUBLIC SERVICE TO HAVE POST LOCATIONS PREMARKED AND SHALL CORE HOLE FOR POST INSTALLATION.

THE DEPARTMENT OF PUBLIC SERVICE WILL REMOVE OR COVER ALL PARKING METER HEADS PUT OUT OF SERVICE BY THIS PROJECT. THERE IS A $60.00 DOLLAR CHARGE FOR THE REMOVAL AND REINSTALLATION OF EACH METER. IN ADDITION, A DAILY METER FEE WILL BE CHARGED FOR ALL ENFORCEMENT HOURS FOR EACH METER TAKEN OUT OF SERVICE. THESE CHARGES WILL BE COLLECTED FROM THE CONTRACTOR IN ADVANCE WITH THE ISSUANCE OF THE STREET OCCUPANCY/EXCAVATION PERMIT FROM THE DEPARTMENT OF PUBLIC SERVICE'S PERMIT OFFICE. (645-7497) THE MANAGER OF PARKING SERVICES SUPPORT (645-7890) SHALL BE NOTIFIED A MINIMUM OF FORTY-EIGHT (48) HOURS (EXCLUDING SAT, SUN, & HOLIDAYS) PRIOR TO BEGINNING WORK. CALL 645-8376 IF UNABLE TO MAKE CONTACT THROUGH THE PRIOR PHONE NUMBER.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE FOLLOWING:
ITEM SPECIAL - PARKING METER POST REMOVAL
ITEM SPECIAL - PARKING METER POST CORE

REVISED 11/6/14

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MAINTENANCE OF TRAFFIC NOTES

PROJECT NAME

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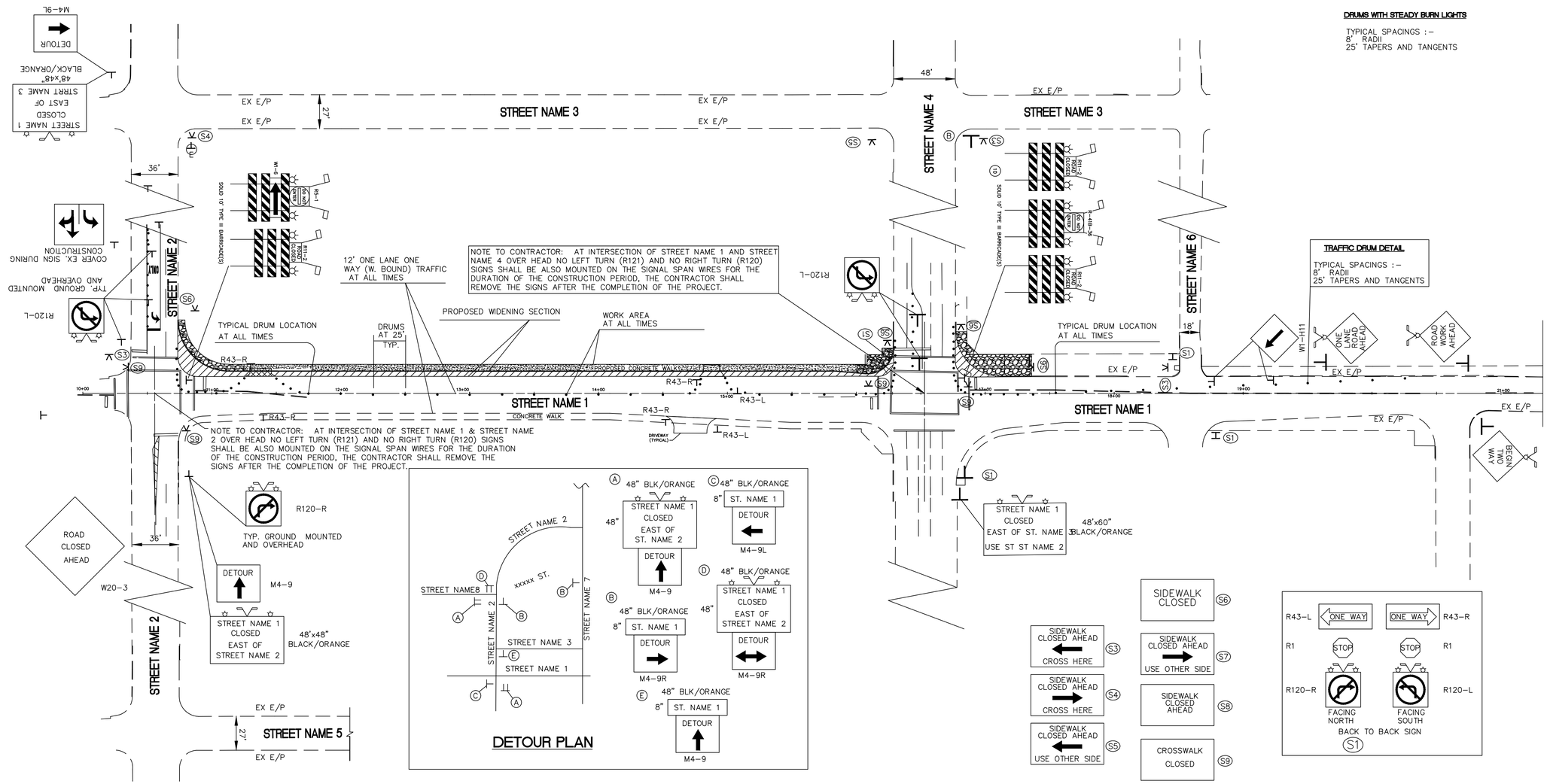

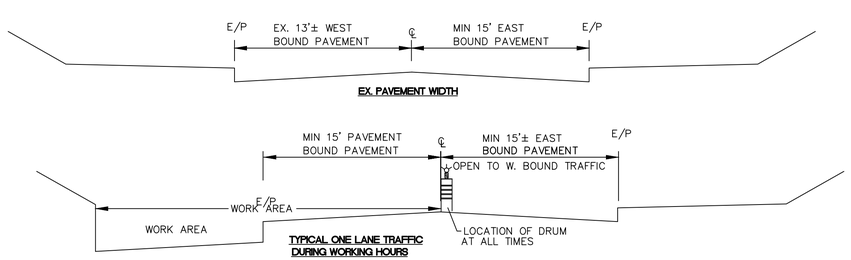

SIGNAL MOT

PHASE I

DURING PHASE 1 EASTBOUND SIGNAL HEADS FOR STREET NAME 11 @ STREET NAME 4 SHALL BE COVERED AND HAVE POWER DISCONNECTED TO THE HEADS AT THE CONTROL CABINET. (SEE %%UITEM 632 COVERING OF VEHICULAR/PED SIGNAL HEADS AND PUSHBUTTONS, AS PER PLAN SHEETS 31-46) CONTACT THE CITY OF COLUMBUS TRAFFIC MAINTENANCE SHOP AT 645-7933 WHEN SIGNAL HEADS ARE TO BE COVERED SO THE CITY CAN DISCONNECT THE EASTBOUND LOOP. (GIVE 3 CITY WORK DAY NOTICE) TEMPORARY SIGNAL POLE INSTALLATION WILL BE COMPLETED AT THIS TIME. EACH TEMPORARY SIGNAL POLE LOCATION IS TO BE STAKED AND THE LOCATION APPROVED BY THE TRANSPORTATION DIVISION SIGNAL INSPECTOR. THE CONTRACTOR MAY REUSE EXISTING SPAN OR INSTALL NEW AS REQUIRED BUT INSTALL TWO NEW PIGTAILS. AS PER PLAN, THE CONTRACTOR SHALL TRANSFER EXISTING SIGNAL ITEMS (SIGNAL CONTROLLER CABINET, PED UNITS, & PUSHBUTTONS W/SIGNS) AND EXTEND CABLE AS NEEDED. WEATHERPROOF SPLICING IS PERMITTED INCLUDING HEAD SHIFTING. ONE OR TWO DOWN GUYS ARE TO BE USED AS SPECIFIED.

PHASE II

SHIFT WESTBOUND SIGNAL HEADS AT STREET NAME1 @ STREET NAME 4 AND STREET NAME 1 @ STREET NAME 2. THE CONTRACTOR SHALL SHIFT OVERHEAD SIGNS AS INDICATED AND PLACE SIGNAL HEADS AT STREET NAME 1 @ STREET NAME 2 4' ON EACH SIDE OF THE CENTER LINE OF THE LANE. SIGNAL HEADS AT ROAD NO. 1 @ xxxx ST SHALL BE PLACED IN SAME MANNER UNLESS LEFT TURN LANE IS ADDED THEN SHIFT SIGNAL HEADS 1' FROM DOUBLE YELLOW LINE WITH 9' SPACING. THE CONTRACTOR SHALL NOTIFY THE SIGNAL MAINTENANCE SHOP (645-7933) THREE (3) CITY WORKDAYS PRIOR TO ANY LANE SHIFTING THAT EFFECTS TRAFFIC PASSING THROUGH A SIGNALIZED INTERSECTION OR PRIOR TO ANY SIGNAL WORK SO REQUIRED SIGNAL TIMING, PHASING OR CONTROL CABINET CHANGES CAN BE MADE TO THE EXISTING EQUIPMENT.

CONSTRUCTION STAGING: STAGE 2

CONSTRUCTION OF NEW PAVEMENT ON THE NORTH SIDE OF STREET NAME 1.

1. THE ERECTION OF THE TEMPORARY SIGNS AND TRAFFIC MARKINGS.
2. THE CONSTRUCTION OF THE NEW WIDENING SECTION ON THE NORTH SIDE OF STREET NAME 1 AND THE CONSTRUCTION/RELOCATION OF ALL UNDERGROUND UTILITIES AND CONDUITS.
3. THE FINAL PAVING OF THE ENTIRE PROJECT WIDTH AND LENGTH
4. THE SEEDING AND MULCHING OF THE ENTIRE SITE.
5. THE FINAL STRIPING AND SIGNING OF THE ENTIRE PROJECT
6. THE CONSTRUCTION OF THE NEW SIGNAL AT THE INTERSECTION OF STREET NAME 1 AND STREET STREET NAME 4, AND THE SIGNAL AT THE INTERSECTION OF STREET NAME 1 AND STREET NAME 2.
7. THE CONTRACTOR SHALL PERFORM FINAL CLEANING AND REMOVE ALL EQUIPMENT FROM SITE
8. THE CONTRACTOR SHALL COMPLY WITH THE FINAL PUNCH LIST PREPARED BY THE CITY'S INSPECTOR.
9. THE CLOSE-OUT OF THE PROJECT.
10. PAYMENT FOR MAINTENANCE OF TRAFFIC (NOT INCLUDING MOBILIZATION, PERMANENT SIGNING AND STRIPING) SHALL BE INCLUDED IN THE LUMP SUM ITEM 614 MAINTENANCE OF TRAFFIC.
11. CONTRACTOR TO FURNISH AND INSTALL DRUMS TO CLOSE THE SOUTH BOUND LEFT LANE OF STREET NAME 4 AT ALL TIMES.

HORIZ. SCALE 50 0 25 50

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MAINTENANCE OF TRAFFIC

PROJECT NAME

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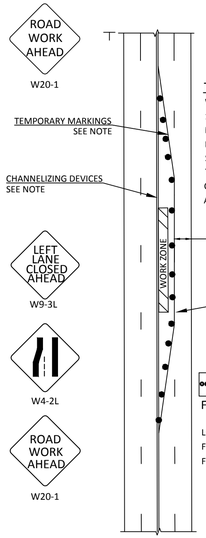
TYPICAL LEFT LANE CLOSURE



L= TAPER LENGTH- USE OMUTCD PART 6 TABLE 62-C
FOR SPEEDS 45 MPH OR LESS L=WS^/60
FOR SPEEDS > 45 MPH L=45MPH

TEMPORARY MARKINGS

WHEN LANE CLOSURES EXCEED 14 CALENDAR DAYS TEMPORARY MARKINGS (740.06) TAPE, SHALL BE INSTALLED. CONFLICTING MARKINGS SHALL BE COVERED WITH NON-REFLECTIVE TAPE OR REMOVED. ITEM 642 PAINT CAN BE USED IF AREA IS TO BE MILLED AND/OR RESURFACED.

CHANNELIZING DEVICES

DURING DAYTIME OPERATIONS, DRUMS MAY BE SUBSTITUTED WITH 42" CONES WITH THE PERMISSION OF THE PROJECT ENGINEER OR TTC COORDINATOR. DRUMS WITH TYPE C - STEADY BURN WARNING LIGHTS SHALL BE USED AT NIGHT. CONES MAY ALSO BE REQUIRED ALONG CENTERLINE.

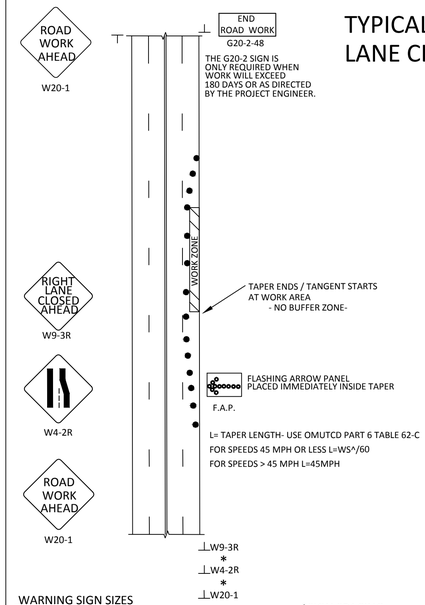
CHANNELIZING DEVICE SPACING
40' - TANGENTS
20' - TAPERS
6'-8' - RADII

⊥ U-CHANNEL DRIVEPOST

● DRUM WITH TYPE C or TYPE D 360 DEGREE STEADY BURN WARNING LIGHTS OR 42" REFLECTORIZED CHANNELIZING DEVICE, CONES

FLAGGER

TYPICAL RIGHT LANE CLOSURE



L= TAPER LENGTH- USE OMUTCD PART 6 TABLE 62-C
FOR SPEEDS 45 MPH OR LESS L=WS^/60
FOR SPEEDS > 45 MPH L=45MPH

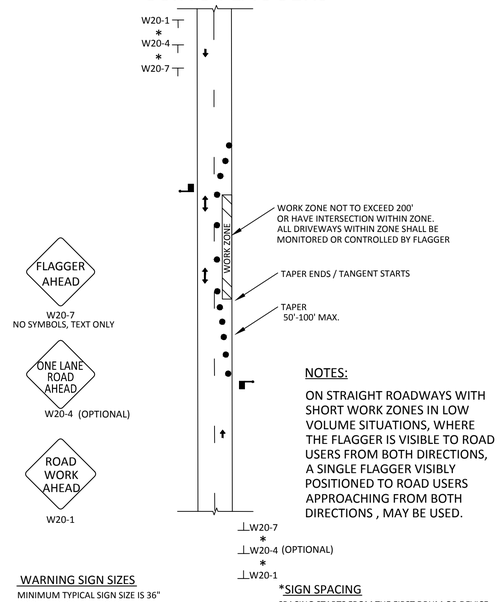
WARNING SIGN SIZES

MINIMUM TYPICAL SIGN SIZE IS 36" INCREASE SIGN SIZE TO 48" WHEN ON 4-LANE ARTERIAL OR WIDER. PLACE SIGNS ON BOTH SIDES OF A ONE-WAY MULTI - LANE STREET.

*SIGN SPACING

SPACING STARTS FROM THE FIRST DRUM OR DEVICE SPACING IS 100' FOR SPEEDS <= TO 45 MPH OR 350' SPACING FOR SPEEDS > 45 MPH SEE OMUTCD PART 6 TABLE 6C-1

LANE CLOSURE ON TWO-LANE ROAD USING FLAGGERS



NOTES:

ON STRAIGHT ROADWAYS WITH SHORT WORK ZONES IN LOW VOLUME SITUATIONS, WHERE THE FLAGGER IS VISIBLE TO ROAD USERS FROM BOTH DIRECTIONS, A SINGLE FLAGGER VISIBLY POSITIONED TO ROAD USERS APPROACHING FROM BOTH DIRECTIONS , MAY BE USED.

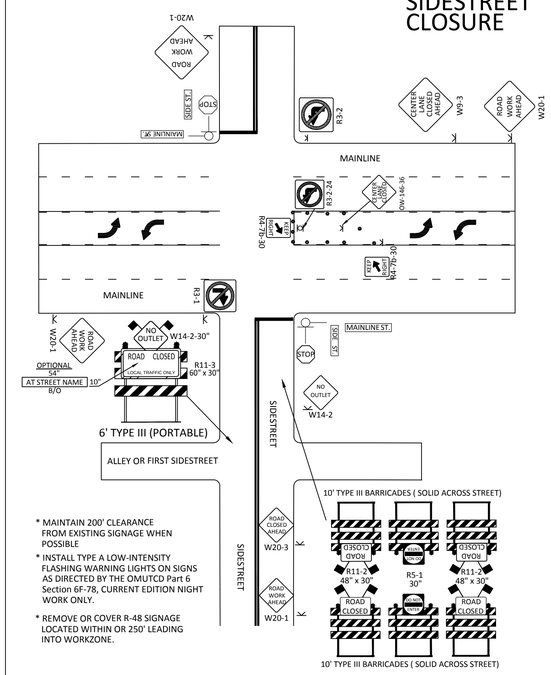
WARNING SIGN SIZES

MINIMUM TYPICAL SIGN SIZE IS 36" INCREASE SIGN SIZE TO 48" WHEN ON ROAD WITH SPEEDS > 45MPH.

*SIGN SPACING

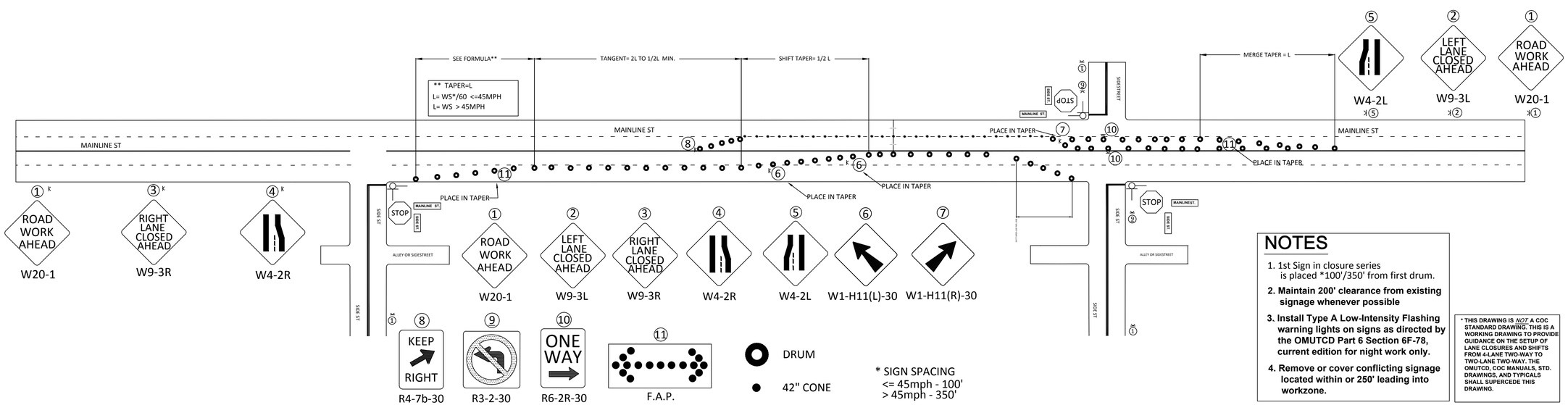
SPACING STARTS FROM THE FIRST DRUM OR DEVICE SPACING IS 100' FOR SPEEDS <= TO 45 MPH OR 350' SPACING FOR SPEEDS > 45 MPH SEE OMUTCD PART 6 TABLE 6C-1

TYPICAL SIDESTREET CLOSURE



* MAINTAIN 200' CLEARANCE FROM EXISTING SIGNAGE WHEN POSSIBLE
* INSTALL TYPE A LOW-INTENSITY FLASHING WARNING LIGHTS ON SIGNS AS DIRECTED BY THE OMUTCD Part 6 Section 6F-78, CURRENT EDITION NIGHT WORK ONLY.
* REMOVE OR COVER R-48 SIGNAGE LOCATED WITHIN OR 250' LEADING INTO WORKZONE.

EXISTING 4 LANE - 2 WAY to 2 LANE - 2 WAY Using LANE CLOSURE PLUS SHIFT ACROSS CENTERLINE



NOTES

1. 1st Sign in closure series is placed *100'/350' from first drum.
2. **Maintain 200' clearance from existing signage whenever possible**
3. **Install Type A Low-Intensity Flashing warning lights on signs as directed by the OMUTCD Part 6 Section 6F-78, current edition for night work only.**
4. **Remove or cover conflicting signage located within or 250' leading into workzone.**

*** THIS DRAWING IS *NOT* A COC STANDARD DRAWING. THIS IS A WORKING DRAWING TO PROVIDE GUIDANCE ON THE SETUP OF LANE CLOSURES AND SHIFTS FROM 4-LANE TWO-WAY TO TWO-LANE TWO-WAY. THE OMUTCD, COC MANUALS, STD. DRAWINGS, AND TYPICALS SHALL SUPERCEDE THIS DRAWING.**

HORIZ. SCALE 50 0 25

CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC

PROJECT NAME

REVISED 07/7/14

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SHEET NUMBER																ITEM	GRAND TOTAL	UNIT	DESCRIPTION
8	9	10	28	35	37	40	43	46	49	52	55	58	61	66	71				
																			ROADWAY
																201	LUMP	LUMP	CLEARING AND GRUBBING
					47	61	150		360	195	382	42				202	1237	L.F.	PIPE REMOVED
							1	1	2	1	4	1				202	10	EACH	CATCH BASIN REMOVED
										382	227					202	609	L.F.	GUARDRAIL REMOVED
											1				1	202	2	EACH	CUT AND CAP EXISTING SANITARY SEWER
											1					202	1	EACH	SANITARY MANHOLE REMOVED
						1	1			8						202	10	EACH	REMOVAL MISC. ROCK
					14	2										202	16	EACH	REMOVAL MISC: POST
							271	19	259							202	549	L.F.	FENCE REMOVED
			6030													203	6030	C.Y.	EMBANKMENT
			14645													203	14645	C.Y.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
					4		4		8		4					608	20	EACH	CURB RAMP
					6	2	6		8		6					608	28	EACH	DETECTABLE WARNING
20 *																616	20	M GAL.	WATER
2 *																616	2	TONS	CALCIUM CHLORIDE
500 *																653	500	C.Y.	TOPSOIL FURNISHED
	12 *															690	12	EACH	SPECIAL – MAILBOX SUPPORT
		2 *														SPECIAL	2	EACH	TESTING OF NON–CONTAMINATED MATERIAL
		10 *														SPECIAL	10	C.Y.	STOCKPILING OF NON–CONTAMINATED MATERIAL
		10 *														SPECIAL	10	C.Y.	CONTAMINATED MATERIAL REMOVED AND DISPOSED OF
																			SWPPP
				895												207	895	L.F.	FILTER FABRIC FENCE
				7												207	7	EACH	CATCH BASIN PROTECTION
				35												207	35	EACH	INLET PROTECTION
				1												207	1	EACH	TEMPORARY FILTER FABRIC DITCH CHECK
				488												207	488	S.Y.	CONSTRUCTION DITCH PROTECTION
			16027													659	16027	S.Y.	SEEDING AND MULCHING
10																659	10	MGAL	WATER
																			DRAINAGE
							55		133							901	188	L.F.	6" PIPE WITH TYPE 1 BEDDING
					524	43	86	111	151	132	168	112				901	1327	L.F.	12" PIPE, WITH TYPE I BEDDING
					46											901	46	L.F.	15" PIPE, WITH TYPE I BEDDING
					201	400					472	397				901	1470	L.F.	18" PIPE, WITH TYPE I BEDDING
						100	500	440	562	50						901	1652	L.F.	24" PIPE, WITH TYPE I BEDDING, WITH ITEM 912 COMPACTED GRANULAR BACKFILL
										288	1	1				901	288	L.F.	30" PIPE, WITH TYPE I BEDDING, WITH ITEM 912 COMPACTED GRANULAR BACKFILL
											1				1	604	2	EACH	SANITARY MANHOLE
												2				604	2	EACH	SANITARY MANHOLE ADJUSTED TO GRADE
							1						1			604	2	EACH	MANHOLE ADJUSTED TO GRADE
					1							1				604	2	EACH	HEADWALL FOR 12" PIPE
													2	2		604	4	EACH	CATCH BASIN ADJUSTED TO GRADE
					2			1	3	1		1				604	8	EACH	STANDARD CATCH BASIN
					4	2	2	2	3	4	5	3				604	25	EACH	MANHOLE TYPE C
					6	2	4	4	4	5	6	4				604	35	EACH	CURB AND GUTTER INLET
											61				40	901	101	L.F.	8" PIPE WITH TYPE 1 BEDDING
																	1		
																			WATER WORK
		5 *			2	1		2	2		3	1	1			807	17	EACH	VALVE BOX ADJUSTED TO GRADE
		5 *							2							807	7	EACH	WATER SERVICE TAP ADJUSTED TO GRADE
							1									808	1	EACH	RELOCATE 6" WATER SERVICE LINE
							2									808	2	EACH	RELOCATE 8" WATER SERVICE TAP
								18								808	18	L.F.	RELOCATE 12" WATER LINE
									1							808	1	EACH	2" WATER SERVICE TAP RELOCATED
						1										809	1	EACH	FIRE HYDRANT ADJUSTED TO GRADE
					1				1	1	2		1			810	6	EACH	6" HYDRANT EXTENSION
							1	2								810	3	EACH	8" HYDRANT EXTENSION

* = CONTINGENCY QUANTITY

GENERAL SUMMARY

PROJECT NAME

X
XX

XXXX - E

REVISED 10/24/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\07_01 GENERAL SUMMARY (CIP).dwg (Gen Sum (CIP))

PAVEMENT WIDENING AREA:

STREET NAME 1

STA. 46+00 TO STA. 47+00	= 100' X (0' + 11')/2	= 550.00 SF.
STA. 47+00 TO STA. 49+26	= 226' X 11'	= 2486.00 SF.
SOUTH-WEST CORNER	= CAD GENERATED	= 860.00 SF.
STA. 50+75 TO STA. 52+35	= 160' X 11'	= 1760.00 SF.
STA. 52+35 TO STA. 53+35	= 100' X (11' + 0')/2	= 550.00 SF.
NORTH-EAST CORNER	= CAD GENERATED	= 767.00 SF.
	SUB-TOTAL	= 6973.00 SF.

STREET NAME 2

STA. 17+08 TO STA. 19+19	= 211' X 11'	= 2321.00 SF.
STA. 19+19 TO STA. 19+74	= CAD GENERATED	= 997.00 SF.
STA. 20+82 TO STA. 21+87.50	= 105.5' X 11'	= 1160.50 SF.
STA. 21+87.50 TO STA. 22+46	= 58.5' X (11' + 0')/2	= 321.75 SF.
NORTH-WEST CORNER	= CAD GENERATED	= 877.00 SF.
	SUB-TOTAL	= 5677.25 SF.
	TOTAL	= 12,650.25 SF.

ITEM: 448: 1.5"" ASPHALT CONCRETE, SURFACE COURSE (MEDIUM TRAFFIC), PG64-22
= (12,650.25 SF X 1.50"/12)/27 = 58.57 CY

PAVEMENT PLANING AND RESURFACING AREA = (74,077.00 SF X 1.50"/12)/27 = 342.95 CY

TOTAL = 401.52 CY

ITEM: 305: 8" PORTLAND CEMENT CONCRETE BASE: = 12,650.25 SF/9 = 1405.58 SY

ITEM: 448: 1.5" ASPHALT CONCRETE, INTERMEDIATE COURSE (MEDIUM TRAFFIC), PG64-22
= (12,650.25 SF. X 1.50"/12)/27= 58.57 CY

AREA FOR ITEM: 204: SUBGRADE COMPACTION

STREET NAME 1

STA. 46+00 TO STA. 47+00	= 100' X (0' + 11')/2	= 550.00 SF.
STA. 47+00 TO STA. 49+26	= 226' X 11'	= 2486.00 SF.
SOUTH-WEST CORNER	=CAD GENERATED	= 860.00 SF.
STA. 50+75 TO STA. 52+35	= 160' X 11'	= 1760.00 SF.
STA. 52+35 TO STA. 53+35	= 100' X (11' + 0')/2	= 550.00 SF.
NORTH-EAST CORNER	= CAD GENERATED	= 767.00 SF.
	SUB-TOTAL	= 6973.00 SF.

STREET NAME 2

STA. 17+08 TO STA. 19+19	= 211' X 13.5'	= 2848.50 SF.
STA. 19+19 TO STA. 19+74	=CAD GENERATED	= 997.00 SF.
STA. 20+82 TO STA. 21+87.50	= 105.5' X 13.5'	= 1424.25 SF.
STA. 21+87.50 TO STA. 22+46	= 58.5' X (13.5' + 0')/2	= 394.88 SF.
NORTH-WEST CORNER	= CAD GENERATED	= 877.00 SF.
	SUB-TOTAL	= 6541.63 SF.
	TOTAL	= 13,514.63 SF.

ITEM: 204: SUBGRADE COMPACTION: = 13,514.63 SF./9 = 1501.63 S.Y.

ITEM: 609: COMBINATION CURB AND GUTTER; TYPE ____

STA. 17+10 TO STA. 19+19 (RT.)	= 214.00 L.F.
STA. 20+82 TO STA. 22+46 (LT.)	= 164.00 L.F.
TOTAL	= 378.00 L.F.

ITEM: 605: 4" PIPE UNDERDRAIN: = 378' + 996' = 1374.00 L.F.

ITEM: 407: TACK COAT:

FROM PAVEMENT WIDENING	= (12,650.25 SF./9) X 0.10 GAL./S.Y.	= 140.56 GALS.
FROM PAVEMENT PLANING & RESURFACING	= (74,077.00 SF./9) X 0.15 GAL./S.Y.	= 1234.62 GALS.
FROM PAVEMENT CUT	= (1381.00 LF. X 11"/12) X 0.10 GAL./S.Y.	= 14.07 GALS.
	TOTAL	= 1389.25 GALS.

SURFACE AREA FOR TACK COAT AT PAVEMENT CUT

STA. 46+00 (RT.) TO STA. 19+06 STREET NAME 1 (LT.)	= 425.00 L.F.
STA. 49+14 (LT.) TO STA. 22+46 STREET NAME 1 (LT.)	= 266.00 L.F.
STA. 17+10 (RT.) TO STA. 50+88 STREET NAME 2 (RT.)	= 330.00 L.F.
STA. 20+97 (RT.) TO STA. 53+35 STREET NAME 2 (LT.)	= 360.00 L.F.
TOTAL	= 1381.00 L.F.

ITEM: 609: CURB, STRAIGHT 18":

STA. 46+00 (RT.) TO STA. 19+06 (LT.)	= 403.00 L.F.
STA. 40+87 TO STA. 20+82 (LT.)	= 111.00 L.F.
STA. 19+19 TO STA. 51+47 (RT.)	= 140.00 L.F.
STA. 20+97 TO STA. 53+35 (LT.)	= 342.00 L.F.
TOTAL	= 996.00 L.F.

ITEM: 608: 4" CONCRETE WALK:

STA. 17+10 TO STA. 17+87 (RT.)	= (5' X 77')+(10'X15') NE-CORNER W/O X AVE.	= 535.00 SF.
STA. 18+13 TO STA. 18+35 (RT.)	= 5' X 22'	= 110.00 SF.
STA. 18+68 TO STA. 19+10 (RT.)	= 5' X 42'	= 210.00 SF.
STA. 51+23 TO STA. 51+47 (RT.)	= 12.5' X 24'	= 300.00 SF.
STA. 51+98 TO STA. 52+18 (LT.)	= 5' X 20'	= 100.00 SF.
STA. 52+29 TO STA. 52+49 (LT.)	= 5' X 20'	= 100.00 SF.
STA. 52+83 TO STA. 53+02 (LT.)	= 5' X 19'	= 95.00 SF.
STA. 53+12 TO STA. 53+35 (LT.)	= 5' X 23'	= 115.00 SF.
STA. 47+98.50 TO STA. 48+15 (RT.)	= (4'X13') + (5'X18')	= 142.00 SF.
STA. 48+53 TO STA. 49+06 (RT.)	= 5' X 53'	= 265.00 SF.
STA. 20+90 TO STA. 21+38 (LT.)	= 8' X 48'	= 384.00 SF.
STA. 21+73 TO STA. 21+95 (LT.)	= 8' X 22'	= 176.00 SF.
STA. 21+00 TO STA. 21+10 (RT.)	= 5' X 10'	= 50.00 SF.
STA. 48+87 TO STA. 49+05 (LT.)	= 4' X 18'	= 72.00 SF.
STA. 50+88 TO STA. 51+56 (LT.)	= 5' X 68'	= 340.00 SF.
	TOTAL	= 2994.00 SF.

ITEM: 608: 8" CONCRETE WALK:

STA. 19+10 TO STA. 19+69 (RT.) (SE-CORNER)	= 8.5' X 78'	= 663.00 SF.
STA. 20+74 TO STA. 50+88 (RT.) (NE-CORNER)	= 12'(AVG.) X 58'	= 696.00 SF.
STA. 19+06 (LT.) TO STA. 49+06 (RT.) (SW-CORNER)	= 9.5' X 98'	= 931.00 SF.
STA. 49+05 (LT.) TO STA. 20+90 (LT.) (NW-CORNER)	= 9.8'(AVG.) X 99'	= 970.00 SF.
	TOTAL	= 3260.00 SF.

AREA FOR PAVEMENT PLANING AND RESURFACING:

STREET NAME 2

STA. 17+08 TO STA. 22+50	= (542' X 56') - 2(80' X 11' BUS PADS)	= 28,592.00 SF.

STREET NAME 1

STA. 46+00 TO STA. 49+75	= (375' X 52') - (74' X 11' BUS PAD)	= 18,686.00 SF.
STA. 50+30 TO STA. 55+35	= (505' X 52') - (105' X 11' BUS PAD)	= 25,105.00 SF.

ADD FILLET AREAS	
S.W. CORNER	= 322.00 SF.
S.E. CORNER	= 375.00 SF.
N.E. CORNER	= 416.00 SF.
N.W. CORNER	= 581.00 SF.
TOTAL AREA	= 74,077.00 SF.

HORIZ. SCALE NTS

CALCULATED

CHECKED

CALCULATIONS

PROJECT NAME

X/XX

XXXX-E

REVISED 10/24/14

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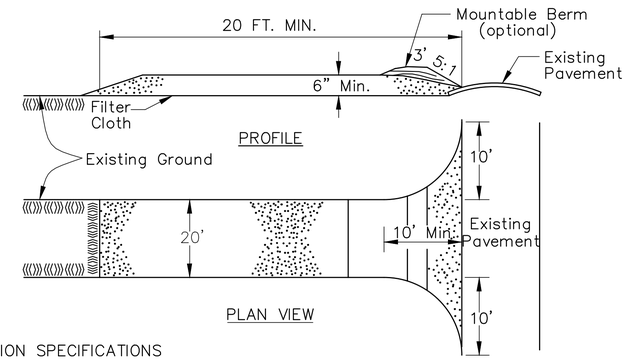
STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATIONS

1. Stone Size – Use 2 inch stone, or reclaimed or recycled concrete equivalent.
2. Length – As required.
3. Thickness – Not less than six (6) inches.
4. Width – Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth – will be placed over the entire area prior to placing of stone.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right–of–way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights–of–way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public right–of–ways. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

Construction Sequence

1. Install required sediment fence and inlet protection on existing inlets as shown on Phase 1 Plan.
2. Install utilities and storm sewers. Provide inlet protection.
3. Construct proposed street and utilities.
4. Stabilize the disturbed areas per temporary and permanent seeding requirements.
5. Remove storm sewer inlet protection.

Note A: The Contractor shall be responsible for maintaining on–site drainage at all times during construction. No separate payment shall be made for maintaining drainage.

EROSION AND SEDIMENT CONTROL QUANTITIES

ITEM	TOTAL QUANTITY				UNIT	
	27	28	29	TOTAL		
207	-	225	3350	3575	LIN. FT.	PERIMETER FILTER FABRIC FENCE
207	-	1	-	8	EACH	CURB INLET PROTECTION
207	3	23	-	76	EACH	CATCH BASIN PROTECTION
207	-	15	4	36	EACH	FILTER FABRIC CATCH BASIN PROTECTION
207	7	2	2	11	EACH	ROCK CHECK DAM
207	-	-	1	1	EACH	STABILIZED CONSTRUCTION ENTRANCE
207	-	-	1	1	EACH	CONCRETE WASHOUT AREA

NOTE TO CONSULTANTS:

INCLUDE ALL ESC/SWP3 PAY ITEMS TO THE QUANTITY TABLE, SUCH AS, BUT NOT LIMITED TO, SITE STABILIZATION (SEED, SOD, GEOTEXTILES, STRAW, OR COMPOST BLANKETS, STRAW WATTLES, COMPOST FILTER SOCKS); TEMPORARY SEDIMENT RISERS AND SKIMMERS

Summary of Post–Construction Stormwater Control Facilities

Control/Outlet Structure No. (As referenced on plans)	Control Functions	Drainage area to Control facility (Acres)	Facility Types*
1	Water quality	0.2	Bioretention
4	Water quality, Flood control	9.3	Wet detention basin
13	Flood control	0.4	Parking lot orifice
24	Water quality, flood control	2.64	Pervious pavement

**The list of control facilities included in this example is for illustrative purposes only and is not meant to exclude other facility types.*

The following note shall be added in lieu of the table above in instances where stormwater control facilities are included in another phase of development or not required:

"Refer to drawing No. <XX–XXX> for stormwater control facility information"

"Reason the project does not meet the requirements of the BMP's"

LEGEND

- Catch Basin Protection
- Curb Inlet Protection
- Filter Fabric Fence
- Structure Number
- Perimeter Filter Fabric Fence
- Stabilized Construction Entrance
- Concrete Washout

This SWP3 plan must be posted on–site. A copy of the SWP3 plan and the approved OEPA storm water permit (with site specific NOI number) must be kept on–site at all times.

Direct discharge of sediment laden water to the city's sewer system or a receiving stream is a violation of Ohio EPA and City of Columbus regulations; the contractor will be held liable for the violation and subsequent fines.

PAVEMENT CUTTING, SAWING AND EXCAVATION OPERATIONS NOTE:
Persuant to Phase II regulations of the NPDES amendment to the Clean Water Act of the United States of America, all public agencies and private contractors performing pavement–cutting operations on City of Columbus streets and roadways shall protect our environment from the dimunitive discharges created by their pavement cutting operations.

This requirement includes but is not limited to wet or dry saw–cutting, jack hammering, excavation equipment use, etc. The public agency and/or private contractor work crews shall recover and dispose of particles, polluted waters, or other such small discharges resulting from their pavement cutting operations and protect all storm sewer inlets from receiving runoff of said diminutive discharges. The agency or contractor responsible for each pavement cutting activity shall be solely liable for Notice of Violations (NOV/s) and fines issued by city of Columbus and/or State of Ohio authorities.

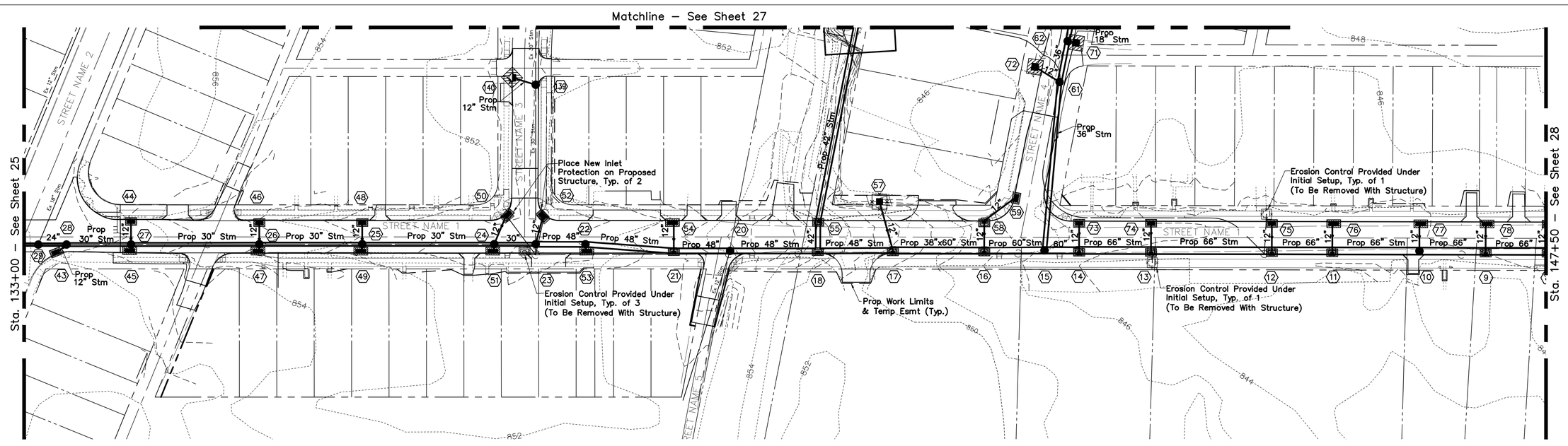
Equipment, materials and methods shall be provided by the responsible public agency and/or private contractor to work crews performing the pavement cutting activity and made available to work crews for use in cleaning up the small discharges resulting from such cutting activities and preventing runoff. Additionally, work crews shall be trained to exercise and employ equipment, materials, and environmental protective measures, to prevent discharges from entering the City of Columbus storm sewer systems and watercourses. All pay and work items with pavement cutting, sawing, or excavation shall abide by this note.

Moreover, if project plans, notes and /or drawings include a Stormwater Pollution Prevention Plan (SWP3) or a spill prevention/remediation plan; such plans shall be adhered to in addition to this note for all pavement cutting, sawing, or excavation operations on City of Columbus streets and roadways.

Suggested inlet protection is provided in the project documents under typical inlet protection dwg.1. The engineer shall approve alternative methods of inlet protection.

NOTE TO CONSULTANTS:

IF SWP3 OR SPILL PREVENTION/REMEDIATION PLANS ARE INCLUDED IN CONTRACT DOCUMENTS, THEY SHOULD BE CITED IN THE PARAGRAPH ABOVE BY VOLUME, PAGE OR SHEET NUMBERS; SO DIRECTING THE READER TO SUCH PLAN.



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STORM WATER POLLUTION PREVENTION PLAN

PROJECT NAME

XXXX–E

REVISED 11/2/15

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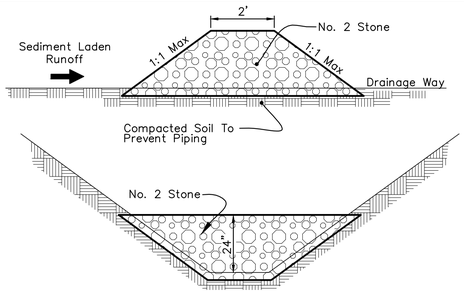
ROCK CHECK DAM



MAINTENANCE:

Aggregate check dams shall be inspected immediately after each rainfall and at least daily during prolonged rainfall.

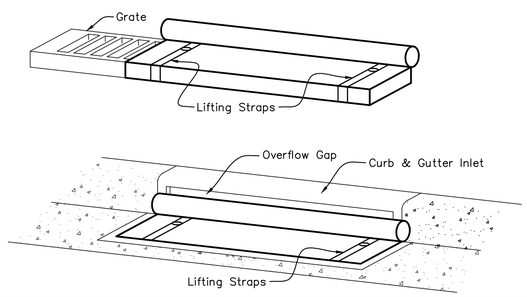
Close attention shall be paid to the repair of damaged check dams, end runs and undercutting beneath dams.

Necessary repairs to check dams shall be accomplished promptly.

Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the aggregate is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

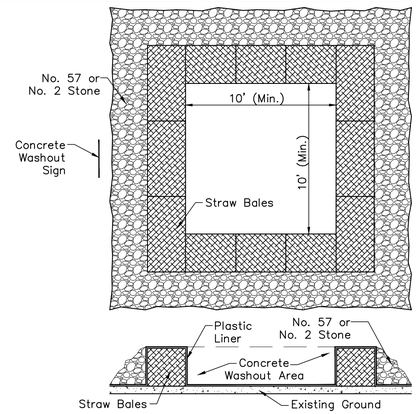
CURB INLET PROTECTION WITH GRATE



MAINTENANCE:
With a stiff bristle broom sweep silt and other debris off surface after each event.

USE FOR INLETS:
6-9, 11-14, 16-18, 21, 37-41, 43-54, 58, 59, 68-70, 73-81, 84, 85, 87-93, 95, 97-103, 126, 127, 129, 131, 150

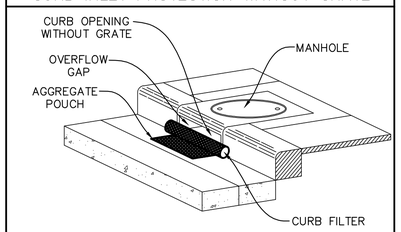
CONCRETE WASHOUT AREA



Concrete trucks shall utilize areas to washout trucks. Accumulated concrete shall be removed from the site and disposed of properly.

As an alternative, contractor shall use a roll off box with liner.

CURB INLET PROTECTION WITHOUT GRATE

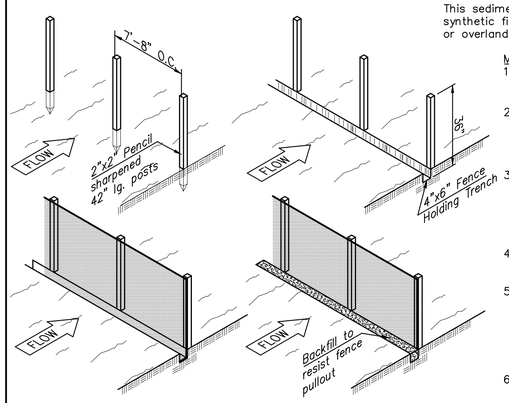


MAINTENANCE:
Remove all accumulated sediment and debris from the surface and vicinity of the unit after each storm event.

If using optional oil absorbents, remove and replace absorbents when they near saturation.

USE FOR INLETS:
Existing (See sheet 24)

SEDIMENT FENCE



SILT FENCE:

This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected.

MATERIAL PROPERTIES ARE:

1. The height of a silt fence shall not exceed 36 inches (higher fences may impound volumes of water sufficient to cause failure of the structure).
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum of a 6 inch overlap, and securely sealed.
3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches). Wood posts will be a minimum of 32" long When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.
4. A trench shall be excavated approximately 4 inches wide and 6 inches deep along the line of posts and upslope from the barrier.
5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1-inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.
6. The standard strength filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.
8. The trench shall be backfilled and soil compacted over the filter fabric. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
9. Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
10. To prevent water ponded by the silt fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.

FABRIC PROPERTIES	VALUES	TEST METHOD
Grab Tensile Strength	90 lb. Minimum	ASTM 1682
Mullen Burst Strength	190 psi Minimum	ASTM 3786
Slurry Flow Rate	0.3 gal./min./f^2 Max	
Equivalent Opening Size	40-80	U.S. Std. Sieve CW-02215
Ultraviolet Radiation Stability	90% Minimum	ASTM-G-26

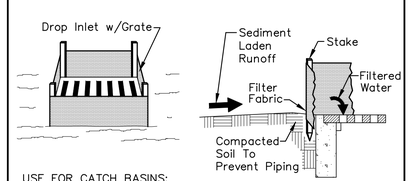
Note: The use of straw wattles has proven to be a versatile and effective ESC BMP, especially in residential settings. Straw wattles may be substituted for silt fence in linear installations. See detail, Sheet XX. The use of compost filter socks and compost blankets are gaining wider acceptance nationwide. they are now approved for use on all Columbus SWP3 plans and construction sites.

MAINTENANCE:
Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier.

Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

FILTER FABRIC CATCH BASIN PROTECTION



USE FOR CATCH BASINS:
57, 104, 105, 110-117, 119, 121-123, 145-148, Existing (See sheets 24 & 28)

SPECIFIC APPLICATION:
This method of inlet protection is applicable where the inlet drains a relatively flat area (slopes no greater than 5 percent) where sheet or overland flows (not exceeding 0.5 cfs) are typical. This method shall not apply to inlets receiving concentrated flows, such as in street and highway medians.

CONTRACTOR RESPONSIBILITY: Details have been provided on the plans in an effort to help the Contractor provide erosion and sedimentation control. The details shown on the plan shall be considered a minimum. Additional or alternate details may be found in the O.D.N.R. Manual "Rainwater and Land Development". The Contractor shall be solely responsible for providing necessary and adequate measures for proper control of erosion and sediment runoff from the site along with proper maintenance and inspection in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

Prior to Construction Operations in a particular area, all sedimentation and erosion control features shall be in place. Field adjustments with respect to locations and dimensions may be made by the Engineer.

The Contractor shall place inlet and channel protection for erosion control immediately after construction of the inlets or channels which are not tributary to a sediment basin or dam.

It may become necessary to remove portions of the barrier during construction to facilitate the grading operations in certain areas. However, the barrier shall be in place in the evening or during any inclement weather.

The limits of seeding and mulching are as shown within the plans. Those areas disturbed outside the seeding limits shall be seeded and mulched at the Contractor's expense.

"Temporary seeding" No area for which grading has been completed or where a denuded area will remain idle for more than 21 days shall be left unseeded for longer than 7 days. If permanent seed is not applied at this time, temporary seeding shall be done at the following rates:

March 1 to August 15
Seed: Oats 2 lbs./1,000 Sq.Ft.
Fertilizer: (12:12:12) 25 lbs./1,000 Sq.Ft.
Mulch: (Straw or Hay) 2 tons/acre

August 15 to November 1
Seed: Annual Rye 2 lbs./1,000 Sq.Ft.
Fertilizer: (12:12:12) 25 lbs./1,000 Sq.Ft.
Mulch: (Straw or Hay) 2 tons/acre

November 1 to March 1
Mulch (ONLY): (Straw or Hay) 2 tons/acre

"Permanent seeding" shall be done between March 15 and September 15. If seeding is done between September 15 and March 15, it shall be classified as "Temporary Seeding." Permanent seed shall be 40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Annual Ryegrass. Permanent seeding shall consist of fertilizing, watering and seeding rates indicated under Item 659. Seeding shall be applied within two (2) days after final grading or following seed bed preparation.

Rates of application of Item 659:
Seed: 4 lbs./1,000 Sq.Ft.
Fertilizer: (12:12:12) 20 lbs./1,000 Sq.Ft.
Mulch: Straw (Hay) 2 tons/acre (3 tons/acre)

MAINTENANCE: It is the Contractor's responsibility to maintain the sediment control features used on this project. The site shall be inspected periodically and within 24 hours of a significant rainfall. Records of these inspections shall be kept and made available to jurisdictional agencies if requested. Any sediment or debris which has reduced the efficiency of a structure shall be removed immediately. Should a structure or feature become damaged, the Contractor shall repair or replace at no additional cost to the Owner. Not all details shown on this sheet may be required for this project. Reference Sediment Control Plan.

The cost for temporary channels, sediment dams, sediment basins, and other appurtenant earthmoving operations shall be included in the price bid for erosion and sedimentation control quantities.

Not all details shown on this sheet may be required for this project.

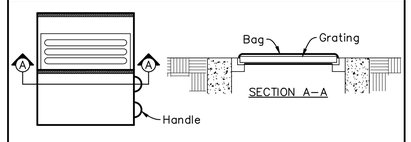
The Contractor shall be responsible to ensure that off-site tracking of sediments by vehicles and equipment is minimized. All such off-site sediment shall be cleaned up daily. Construction of stabilized construction entrances are a part of that responsibility.

Street Cleaning (on an as-needed basis) ir required through the duration of this construction project. This includes sweeping, power cleaning and (if necessary) manual removal of dirt or mud in the street gutters.

The Contractor shall be responsible to ensure that no solid or liquid waste is discharged into stormwater runoff. Sediment-laden water shall be filtered through the use of sediment filtering fences or sedimentation basins prior to discharge to surface waters. Concrete trucks will not be allowed to wash out or discharge surplus concrete into or alongside rivers, streams, and creeks or into natural or man-made channels or swales leading thereto. Concrete truck wash water and surplus concrete shall be confined to areas approved by the Engineer; after solidifying, these waste materials shall be removed from the site.

ALL EROSION & SEDIMENT CONTROL PRACTICES ARE SUBJECT TO FIELD MODIFICATION AT THE DIRECTION OF THE CITY OF COLUMBUS AND/OR OHIO EPA.

CATCH BASIN PROTECTION



MAINTENANCE:
With a stiff bristle broom or square point shovel remove silt & other debris off surface after each event.

USE FOR CATCH BASINS:
71, 72, 133, 134, 136, 138, 140

OEPA NOI #:

PLAN DESIGNER: ENTITY:
ADDRESS:
CONTACT NAME:
PHONE:
EMAIL:

OWNER: ENTITY:
ADDRESS:
CONTACT NAME:
PHONE:
EMAIL:

PROJECT DESCRIPTION: The project consists of approximately 2,100 feet of roadway reconstruction, 700 feet of sidewalk / shared use path addition (beyond roadway reconstruction area), 4,500 feet of storm sewer replacement / installation (beyond roadway reconstruction and sidewalk / path installation areas), 1,100 feet of ditch regrading, 1,100 feet of stream restoration and the establishment of a regional detention basin. The roadway reconstruction and sidewalk / path installation areas include replacements or additions of storm sewers, waterlines, traffic signals, and street lighting.

EXISTING SITE CONDITIONS: The entire project Corridor discharges directly to the Linden Ditch (Argyle Ditch). Storm water reaches Linden Ditch via existing storm sewer systems.

SITE DISTURBANCE: Project earth disturbance area is: XX acres

RECEIVING STREAM: Alum Creek

ADJACENT AREAS: The project corridor is located within a residential area and commercial area.

CRITICAL AREAS: Work will occur in existing stream channels in the area of the proposed detention basin and box culvert at Parkwood Avenue.

EROSION AND SEDIMENT MEASURES: Erosion and sediment will be controlled by the use of inlet protection at storm sewer inlets and the use of construction techniques to minimize the disturbance along the existing channel. To the extent practical, "clean water" from the upstream watershed will be diverted around the in-stream construction activities and sediment-laden water from the construction area will be filtered prior to being released to the downstream channel.

PERMANENT STABILIZATION: All disturbed areas shall be seeded and mulched. Geotextile reinforcement of earthen embankment is specified when in vicinity of channel banks. Hardened, non-erodible materials area also specified for channel bank reinforcement.

MAINTENANCE: All erosion control devices are to be inspected by the construction superintendent daily and after rainfalls. Any damaged facilities are to be replaced / repaired immediately as may be necessary.

SCHEDULE: The Contractor shall provide a schedule of operations to the City. Sedimentation and erosion control features shall be placed and maintained in accordance with this schedule.

SITE CONTACT: ENTITY:
PROJECT ENGINEER::
PHONE:
EMAIL:

HORIZ. SCALE
NTS

CALCULATED
CHECKED

STORM WATER POLLUTION PREVENTION PLAN

PROJECT NAME

XXXX-E

X
XX

REVISED 6/27/14

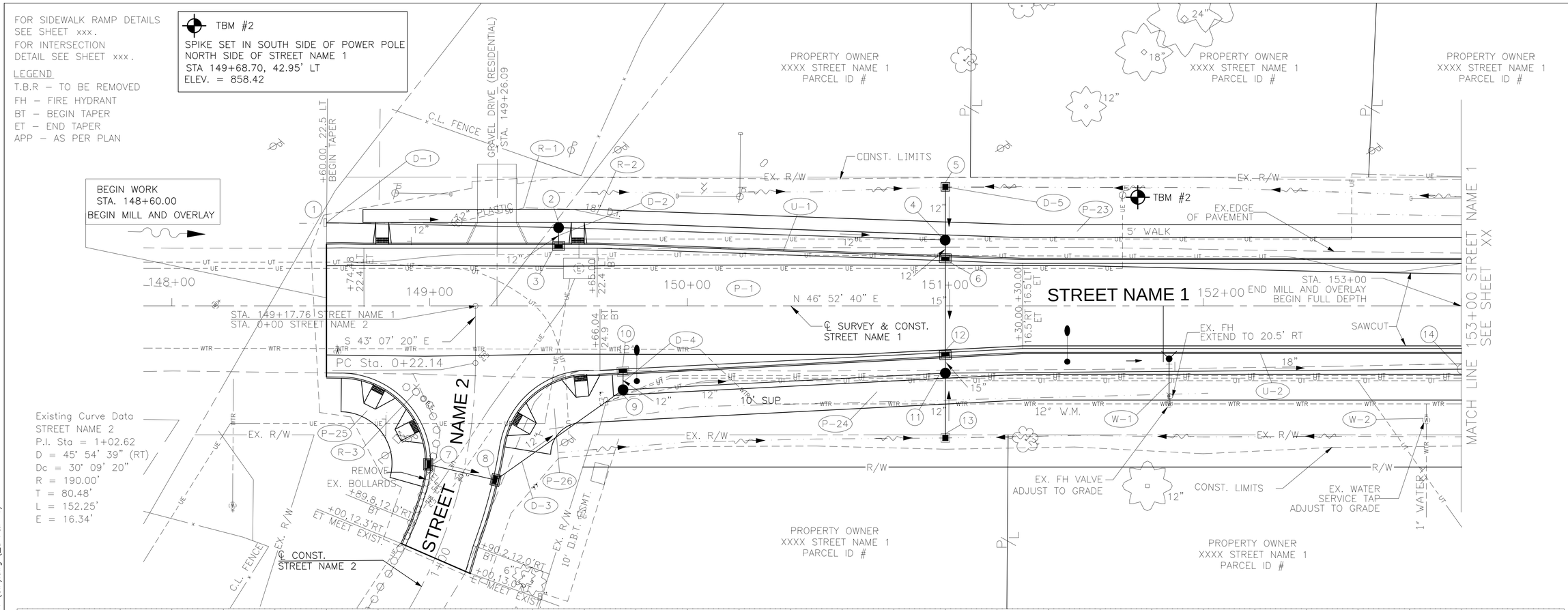
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\08_02 STORM WAT POLLUTION PLAN.dwg (SWPPP-2)

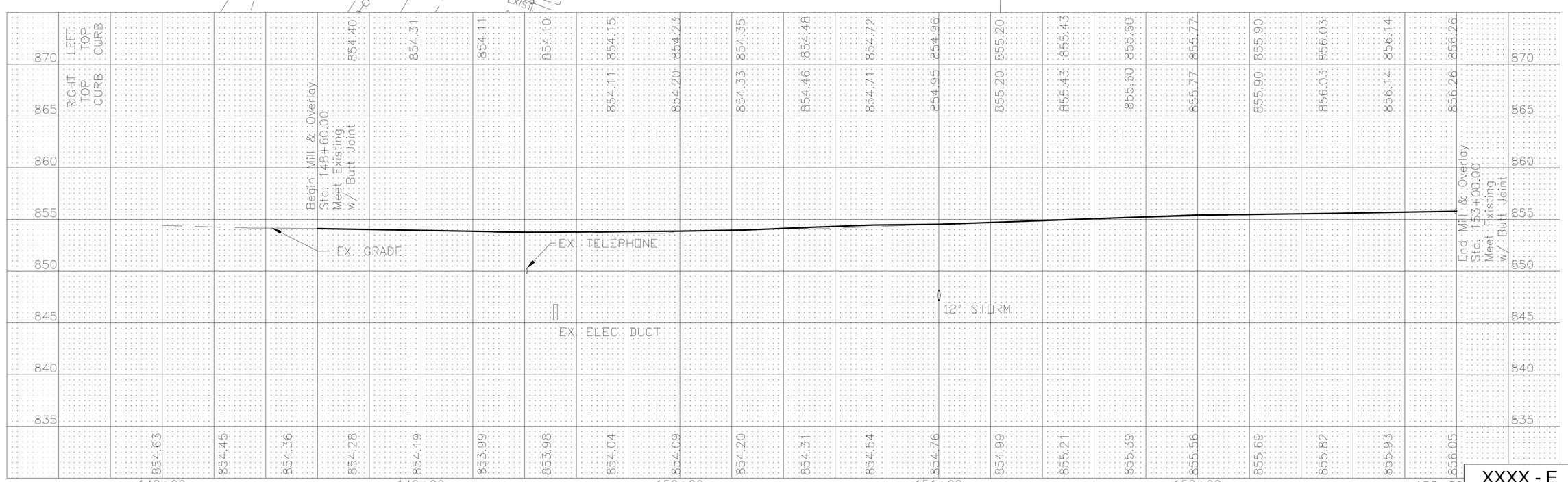
FOR SIDEWALK RAMP DETAILS
SEE SHEET xxx.
FOR INTERSECTION
DETAIL SEE SHEET xxx.

LEGEND
T.B.R – TO BE REMOVED
FH – FIRE HYDRANT
BT – BEGIN TAPER
ET – END TAPER
APP – AS PER PLAN

TBM #2
SPIKE SET IN SOUTH SIDE OF POWER POLE
NORTH SIDE OF STREET NAME 1
STA 149+68.70, 42.95' LT
ELEV. = 858.42

BEGIN WORK
STA. 148+60.00
BEGIN MILL AND OVERLAY





SCALE
0
HORIZONTAL
SCALE IN FEET

PLAN & PROFILE
STATION TO STATION

PROJECT NAME

XXXX - E

X
XX

REVISED 11/7/14
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\09_01 PLAN & PROFILE #1 (CIP).dwg (_a P&P-1)

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED L.F.	202 REMOVAL MISC. POST EACH	901 12" PIPE W/ TYPE 1 BEDDING L.F.	901 15" PIPE W/ TYPE1 BEDDING L.F.	901 18" PIPE W/ TYPE1 BEDDING L.F.	604 HEADWALL FOR 12" PIPE EACH	604 CATCH BASIN EACH	604 MANHOLE TYPE C EACH	604 CURB AND GUTTER INLET EACH	608 CURB RAMP EACH		608 DETECTABLE WARNINGS EACH	807 VALVE BOX ADJUSTED TO GRADE EACH	810 6" HYDRANT EXTENSION EACH
D-1	36	148+60	151+00	LT			241			1		2						
D-2	36	149+50	149+50	LT			7						1					
D-3	36	148+99	153+00	RT			215		201			2	2					
D-4	36	149+75	149+75	RT			7						1					
D-5	36	151+00	151+00	LT/RT			54	46			2		2					
W-1	36	151+87		RT													1	1
W-2	36	152+87		RT													1	
R-1	36	149+08	149+37	LT	29													
R-2	36	149+56	149+74	LT	18													
R-3	36	148+89	148+91	LT		14												
	36	148+81	148+95	RT										2		2		
	36	148+82		LT												1		
	36	149+33	149+58	RT										2		2		
	36	149+57		LT												1		
TOTALS CARRIED TO GENERAL SUMMARY					47	14	524	46	201	1	2	4	6	4		6	2	1

SCALE 0 SCALE HORIZONTAL SCALE IN FEET

SUBSUMMARY

PROJECT NAME

XXXX - E

X / XX

REVISED 4/11/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\09_01 PLAN & PROFILE #1 (CIP).dwg (_b Subsummary (P&P-1))

TBM #3
EAST BOLT OF FH.
NORTHEAST OF STREET NAME 1
AND STREET NAME 3 INTERSECTION
NORTH SIDE OF STREET NAME 1
STA. 17+15, 32.83' LT.
ELEV. = 777.53

LEGEND

– ITEM 304 – 4" AGGREGATE BASE
ITEM XXX – 4" ASPHALT CONCRETE
ITEM XXX – 4" ASPHALT CONCRETE

(XXX) – STREET ADDRESSES

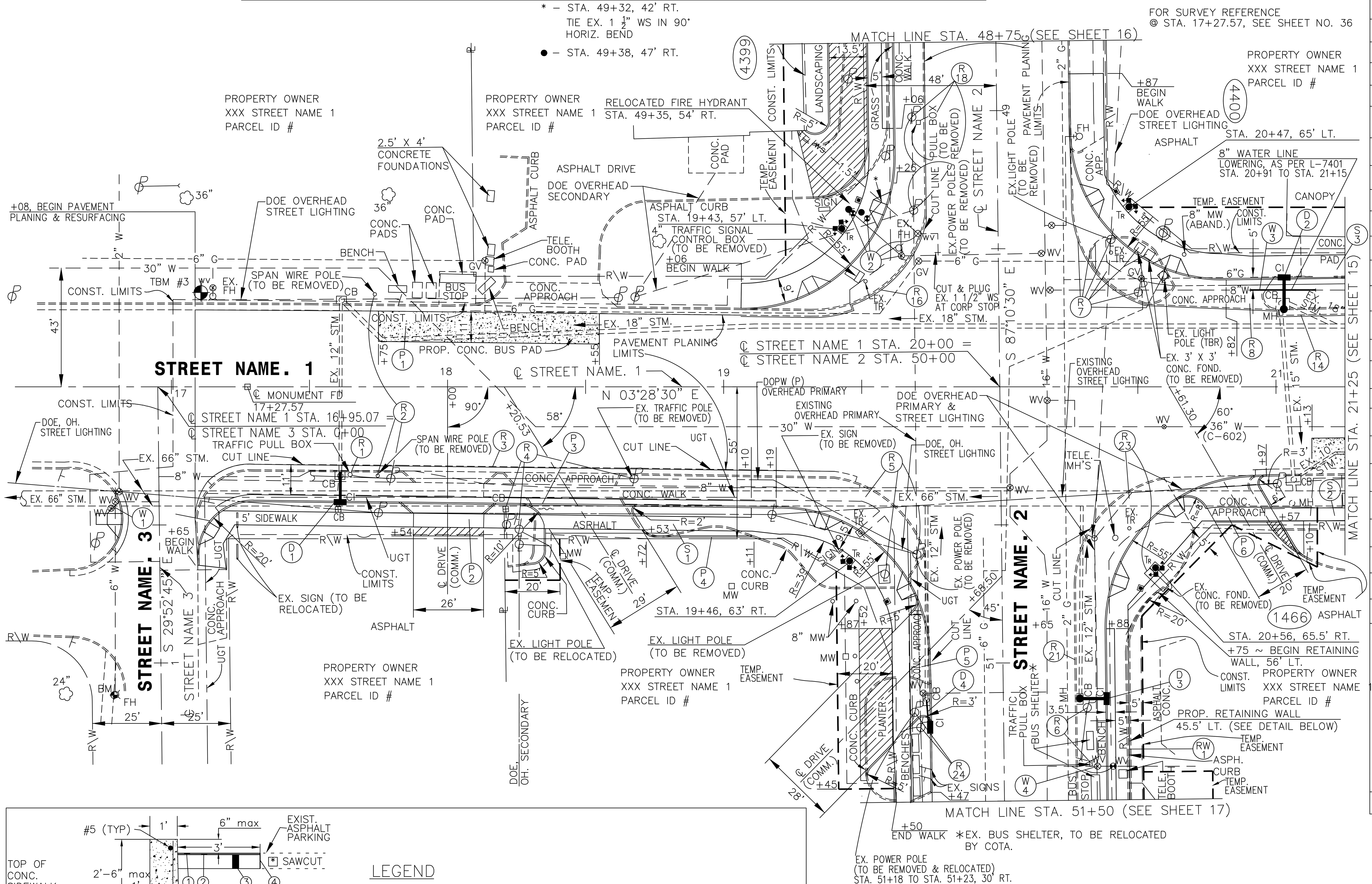
FOR CURB AND PAVEMENT QUANTITIES SEE SHEET NO. 13
FOR CURB RAMP DETAILS, SEE SHEET NO. 29 & 30
FOR PROP. CONCRETE BUS PAD DETAILS, SEE SHEET NO. 15 & 17
FOR C.O.T.A. INFORMATION, SEE SHEET NO. 4
FOR 8" CONCRETE WALK LIMITS, SEE SHEET NO. 27

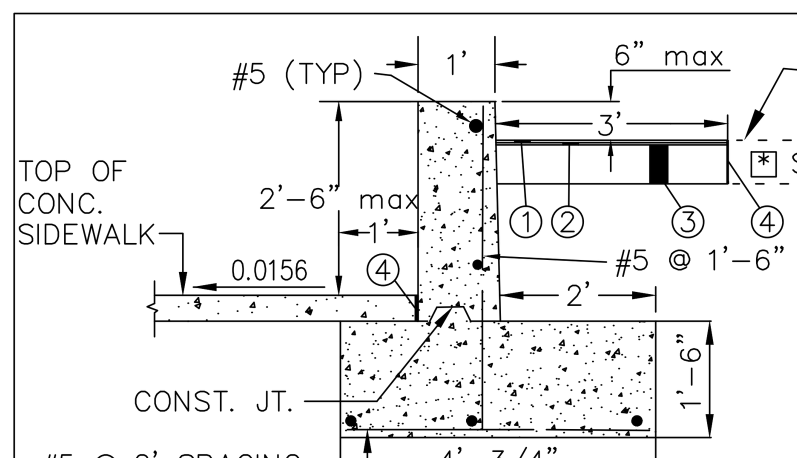
* – STA. 49+32, 42' RT.
TIE EX. 1 ½" WS IN 90° HORIZ. BEND

● – STA. 49+38, 47' RT.

NOTE:
STA. 17+60, 41' RT.
SET PROPOSED CURB & GUTTER INLET ON TOP OF EXIST. 66" STM.

FOR SURVEY REFERENCE @ STA. 17+27.57, SEE SHEET NO. 36





RETAINING WALL
TYPICAL SECTION
NORTHEAST CORNER OF INTERSECTION

LEGEND

(1) ITEM 448 – 1.5" ASPHALT CONCRETE, SURFACE COURSE (MEDIUM TRAFFIC), PG64–22
(2) ITEM 448 – 1.5" ASPHALT CONCRETE, INTERMEDIATE COURSE (MEDIUM TRAFFIC), PG64–22
(3) ITEM 304 – 4" AGGREGATE BASE
(4) ITEM 413 – CRACK SEALING

[*] THE CONTRACTOR SHALL REMOVE ANY DETERIORATED PAVEMENT CAUSED BY SAWCUT OPERATIONS AND REPLACE PER TYPICAL SECTION.

Item	Description	Unit	D-1	D-2	D-3	D-4	P-1	P-2	P-3	P-4	P-5	P-6	R-1	R-2	R-3	R-4	R-5	R-6	R-7	S-1	W-1	W-2	W-3	W-4	TOTALS CARRIED TO SHEET NO. 11
SPECIAL	CONCRETE BUS PAD	S.Y.					98																		98
901	12" CONCRETE PIPE WITH TYPE I BEDDING, CLASS IV	L.F.	9	11	11	12																			43
816	1-1/2" WATER SERVICE TAP RELOCATED	EA.																				1			1
816	3/4" WATER SERVICE TAP RELOCATED	EA.																						1	1
809	FIRE HYDRANT, RELOCATED	EA.																				1			1
808	RELOCATE 8" WATER LINE	L.F.																					24		24
807	VALVE BOXES ADJUSED TO GRADE	EA.																			10				10
802	6" VALVE AND APPURTENANCES	EA.																				1			1
609	18" STRAIGHT CONCRETE CURB	L.F.							22	39		17													78
608	CONCRETE WALK (4")																			202					
604	CURB & GUTTER INLET AA-S125	EA.	1	1	1	1																			4
604	MANHOLE, TYPE C	EA.		1	1																				2
452	8" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT	S.Y.						25	31		59	43													158
304	AGGREGATE BASE	C.Y.									7	1													8
202	CONCRETE FOUNDATION REMOVED	EA.																	2						2
202	LIGHT POLE REMOVED	EA.														1	1		2						4
202	SPAN WIRE POLE REMOVED	EA.												2											2
202	PIPE REMOVED	L.F.	8																						8
202	PAVEMENT REMOVED	S.Y.						13	17		29	38							47						178
202	SIDEWALK REMOVED	S.F.															183		50						233
202	PULL BOX REMOVED	EA.											1					1							2
202	CATCH BASIN REMOVED	EA.	2	1	1	1										1									6
202	CURB AND GUTTER REMOVED	L.F.													236										236
202	POLE REMOVED	EA.												1		1	1	1	1						5
202	CURB REMOVED	L.F.							40		57	16			153				126						392
SIDE			RT.	LT.	LT.	RT.	LT.	RT.	RT.	RT.	RT.	RT.	RT.	LT./RT.	LT./RT.	RT.	RT.	LT.	LT.	RT.	LT./RT.	RT.	LT.	LT.	
STATION	FROM		17+60	21+03	51+13	51+23(LIVINGSTON)	17+75	18+00	18+20.53	18+72	50+68.50	20+61.30	17+65	17+74	0+62(ARAGON)	18+20	17+10	51+37	48+87	17+08	16+78	49+34	20+91	51+38	
STATION	TO						18+55			19+11					51+47(LIVINGSTON)	18+26	51+50(LIVINGSTON)		20+63 (HAMILTON)	19+10	21+75		21+15		

HORIZ. SCALE
50 0 25 50

CALCULATED | CHECKED

PLAN & SUBSUMMARY
STATION TO STATION

PROJECT NAME

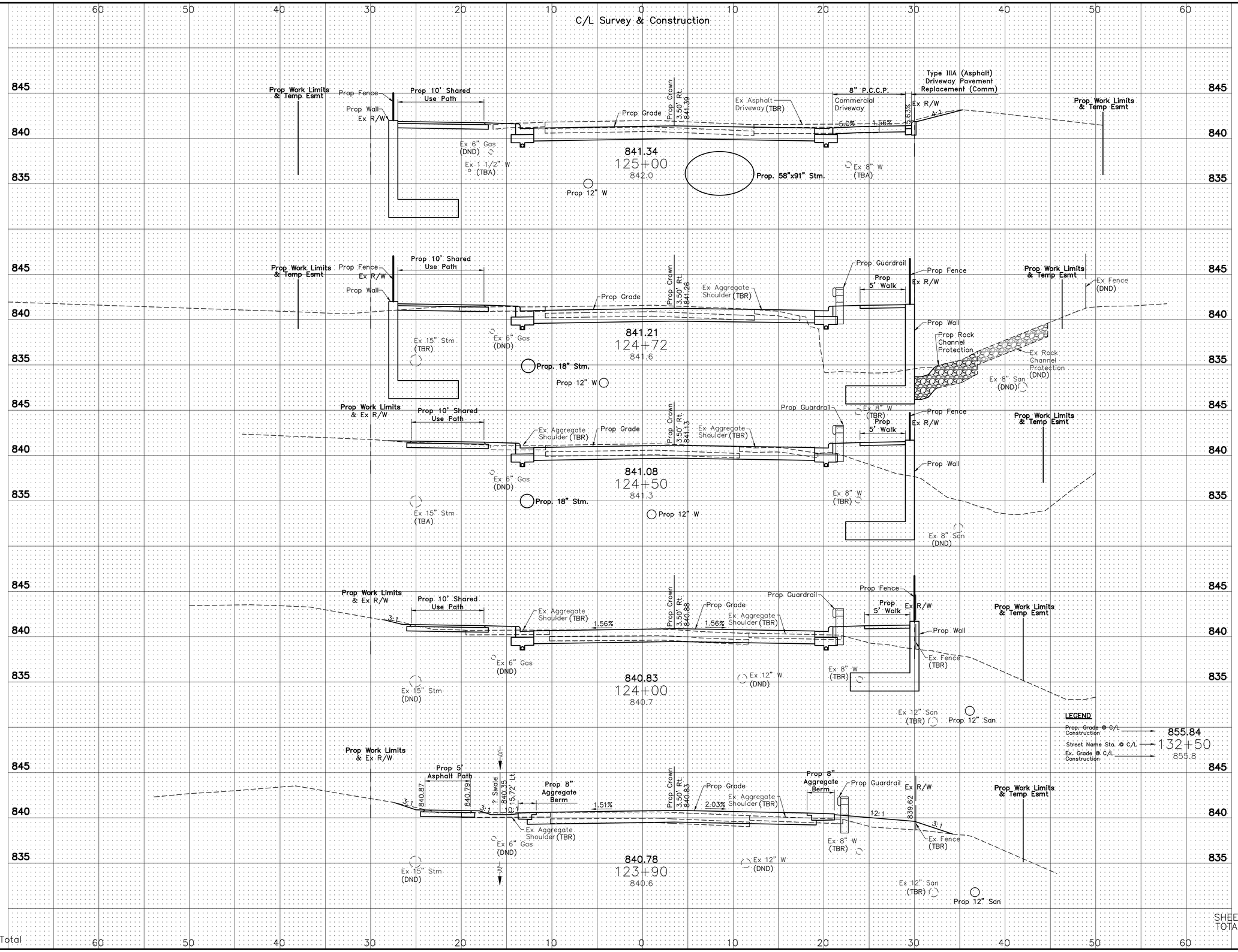
X / XX

XXXX–E

REVISED 11/7/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\09_02 PLAN WITH SUB-SUMMARY (CIP).dwg (Plan with Sub-Sum)

SEEDING END WIDTH	SEEDING YDS.
31	63 <3> Lt (35) Rt
39	135 (7) Rt <14> Rt
31	86 <15> Rt
29	167 <34> Rt
33	34
	377 Total



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
82	29		
		73	49
58	66		
		48	35
59	20		
		104	36
53	19		
		18	6
43	11		
		66	16
SHEET TOTAL		309	142

HORIZ. 5 0 2.5 — VERTICAL SCALE 5 0 2.5

CALCULATED

CHECKED

CROSS SECTIONS STREET NAME 1 STA. 123+50 TO STA. 125+00

PROJECT NAME

X / XX

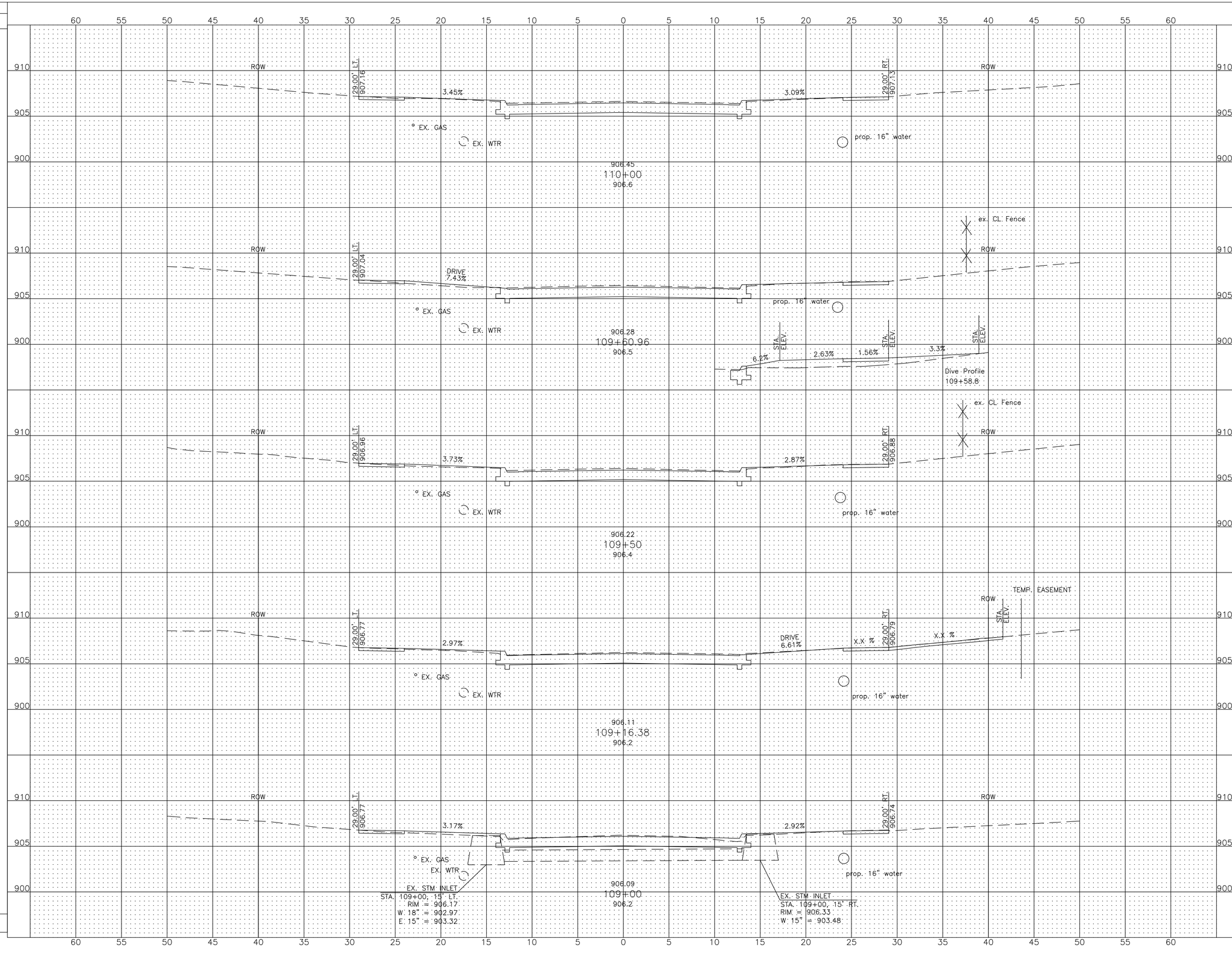
XXXX-E

REVISED 12/2/11

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\10_01 CROSS-SECTION.dwg (X-Sect 1)

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL



SCALE
0
SCALE
HORIZONTAL
SCALE IN FEET

CROSS SECTION
STATION TO STATION

PROJECT NAME

REVISED 12/2/11

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\10_02 CROSS SECTION-2.dwg (X-Sect 2)

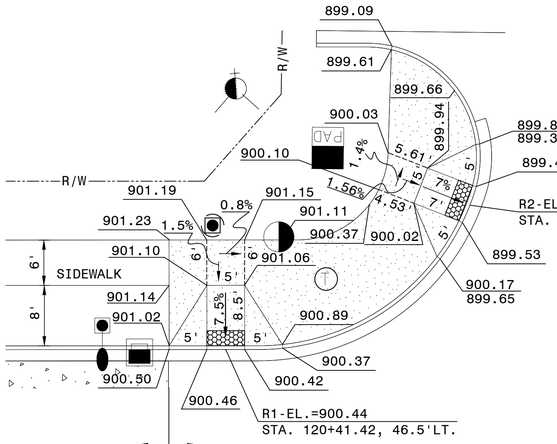
XXXX-E

X
XX

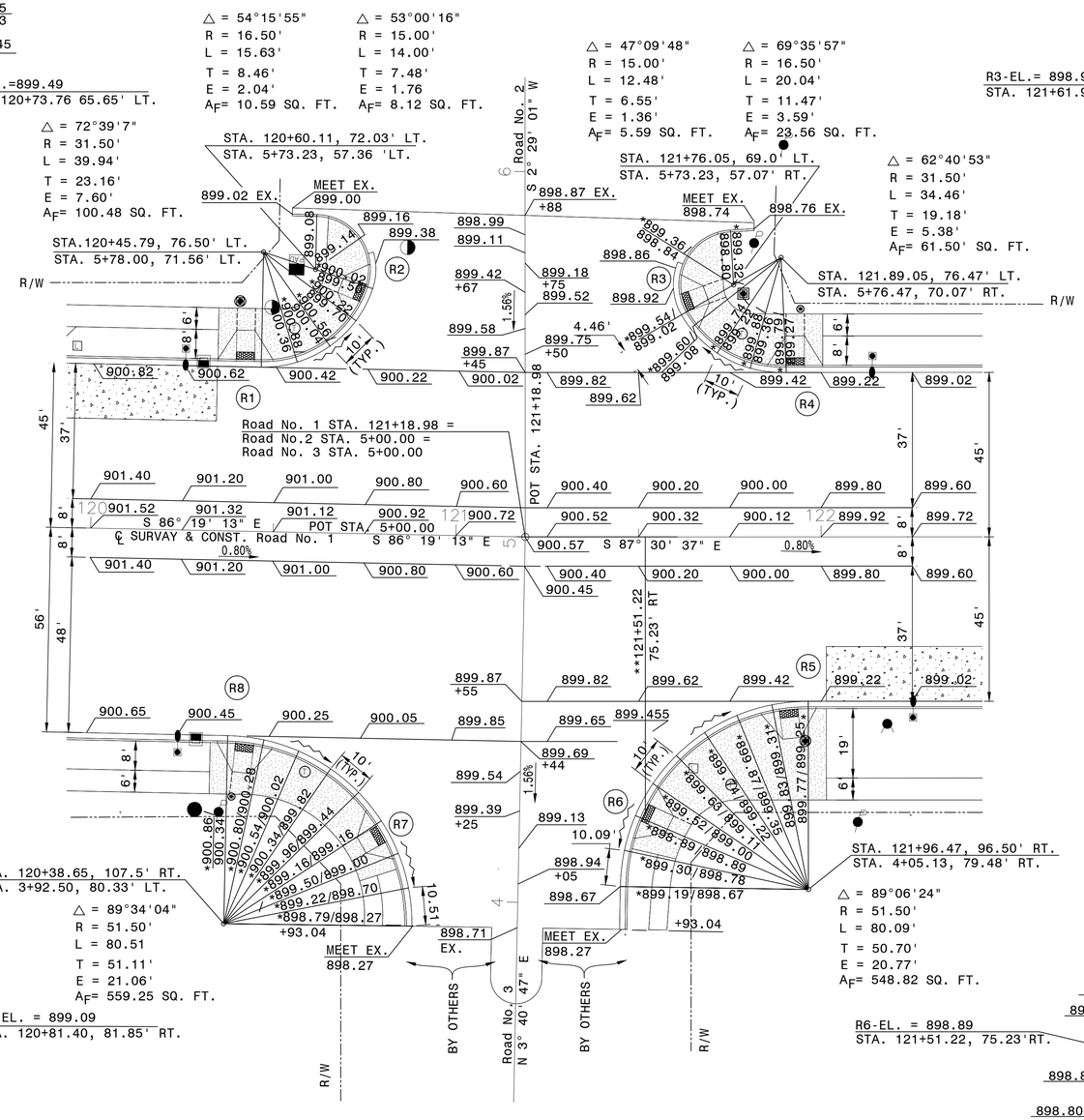
NOTES:

1.** CENTERLINE OF RAMP SHALL BE SET WITH STATION/OFFSET; PROJECT LINE PERPENDICULAR TO CENTERLINE OF ROAD TO ARRIVE AT THE RAMP CENTERLINE STATION.

2. 8" WALK SHALL BE PLACED AT THE INTERSECTIONS OF ARTERIAL ROADWAYS PER STD DWG 2303

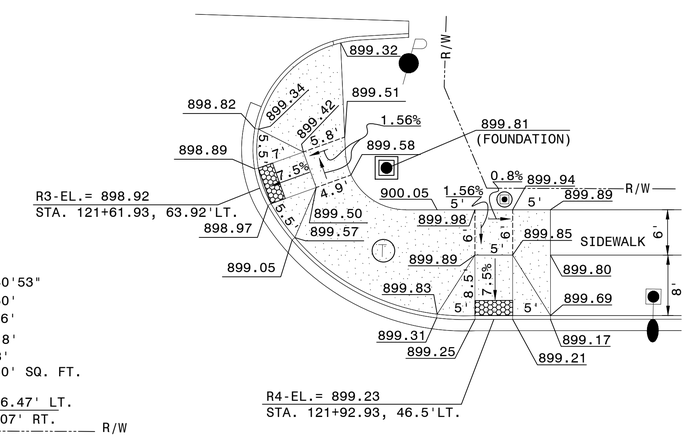


SCALE 1" = 10'



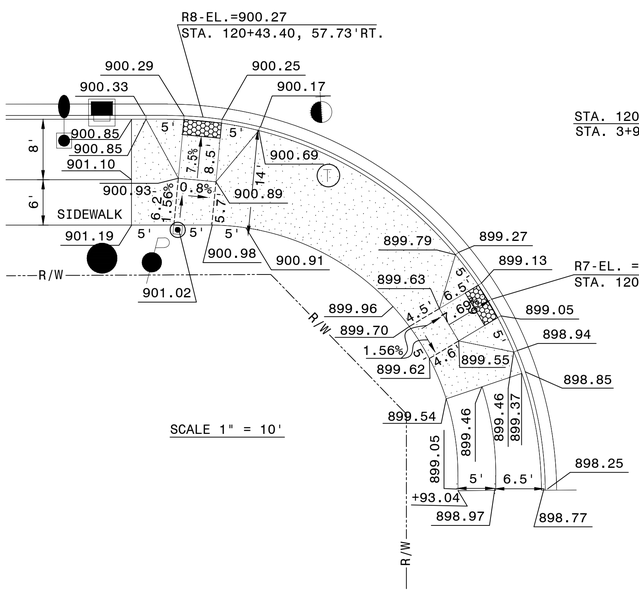
Road No. 1 AT Road No. 2/Road No. 3.

SCALE 1" = 20'

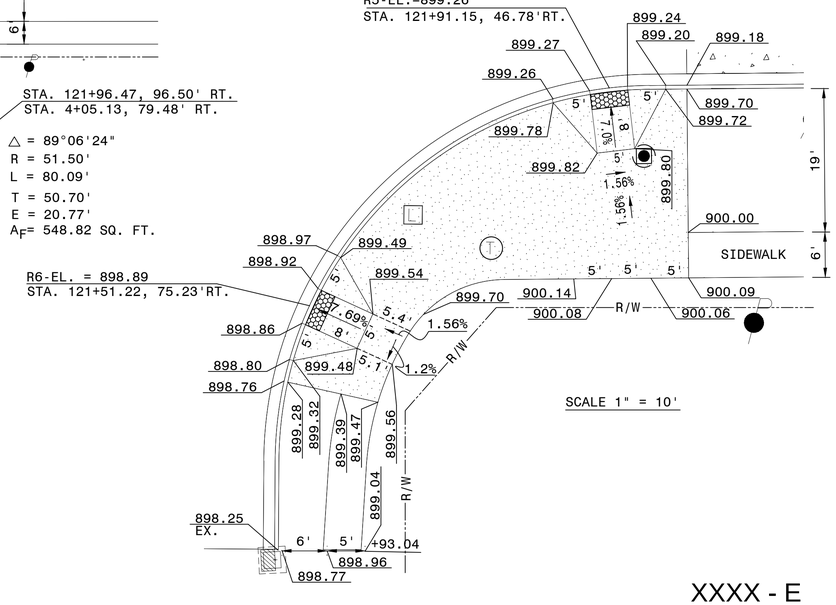


SCALE 1" = 10'

** FINAL FOUNDATION ELEVATION DETERMINED BY SIDEWALK PLACEMENT. SEE DETAIL ON SHEET 252.



SCALE 1" = 10'



SCALE 1" = 10'

*= TC ELEVATION/EP ELEVATION

*= TC ELEVATION/
EP ELEVATION

N

SCALE IN FEET

INTERSECTION & CURB RAMP DETAILS

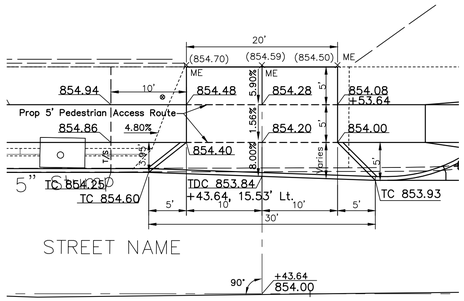
PROJECT NAME

X
XX

XXXX - E

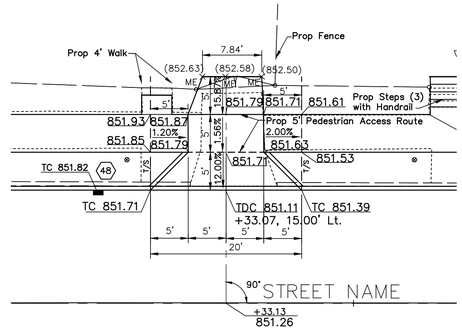
REVISED 10/31/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\11_01 DETAIL Intersection & Ramp.dwg (Intersection & Ramp)



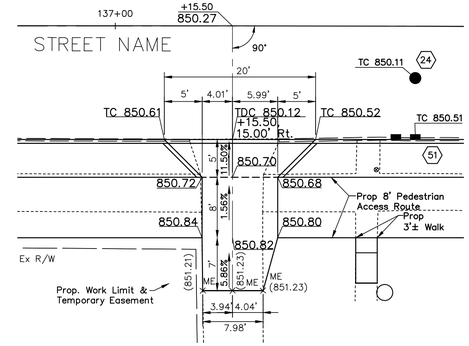
Commercial Drive @ 134+43.64 Lt.

Scale: 1"=10'



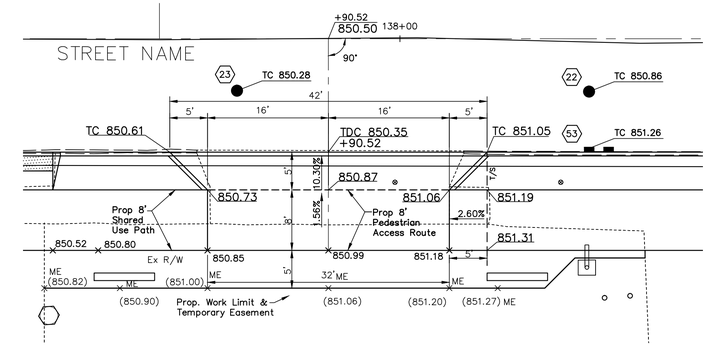
Residential Drive @ 136+33.13 Lt.

Scale: 1"=10'



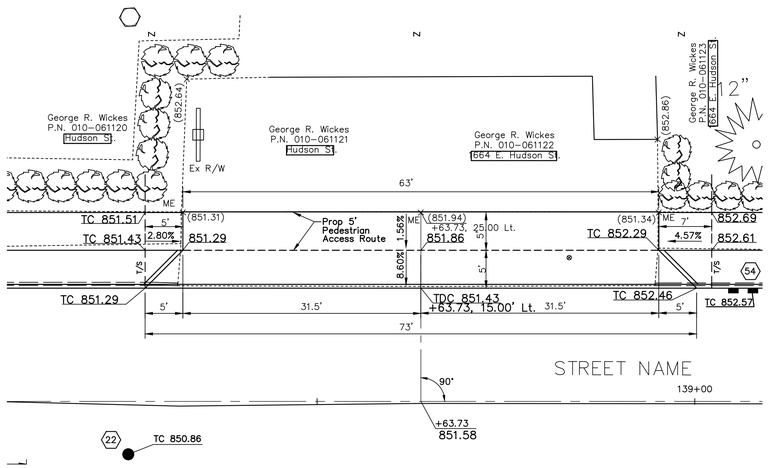
Residential Drive @ 137+15.50 Rt.

Scale: 1"=10'



Commercial Drive @ 137+90.52 Rt.

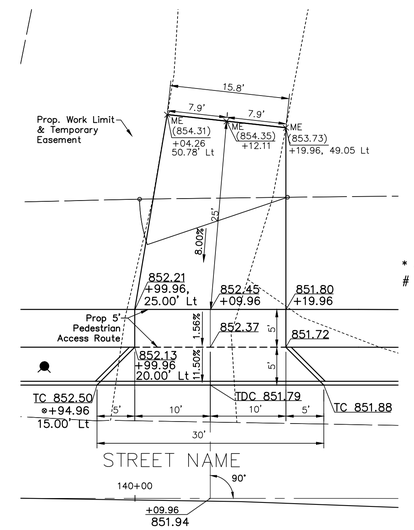
Scale: 1"=10'



Commercial Drive @ 138+63.73 Lt.

Scale: 1"=10'

Curve Data Table								
Ref. Letter	Δ	R	T	L	E	M	A	Rad. Pt. Sta./ Offset Street Name
A	90°00'00"	20.00'	20.00'	31.42'	8.28'	5.86	86 SF	140+45.14, 35.00' Rt.
B	90°00'00"	20.00'	20.00'	31.42'	8.28'	5.86'	86 SF	141+11.14, 35.00' Rt.
C	87°08'01"	20.00'	19.02'	30.42'	7.60'	5.50'	76 SF	141+16.45, 35.00' Lt.
D	61°54'58"	20.00'	12.00'	21.61'	3.32'	2.85'	24 SF	141+86.50, 35.00' Lt.



Commercial Drive @ 140+09.96 Lt.

Scale: 1"=10'

LEGEND

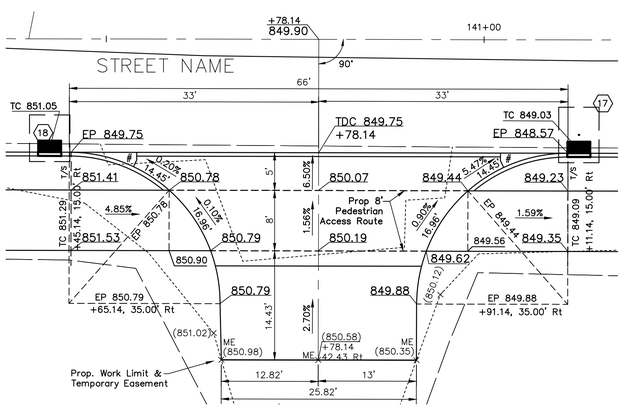
XXX.XX	Proposed Elevations
(XXX.XX)	Existing Elevations
XXX.XX / +XX	Proposed Pavement Crown/Walk Elevation / Proposed Station
TC XXX.XX / +XX	Proposed Top of Curb Elevation / Proposed Station
EP XXX.XX / +XX	Proposed Edge of Pavement Elevation / Proposed Station
TC	Top of Casting
T/S	Match Typical Section Grades
ME	Match Existing

* Actual elevation is 0.44' lower due to driveway cutout.
\# Taper curb height from 6" to at walk with 1:10 flare.

PAVEMENT DETAIL NOTES

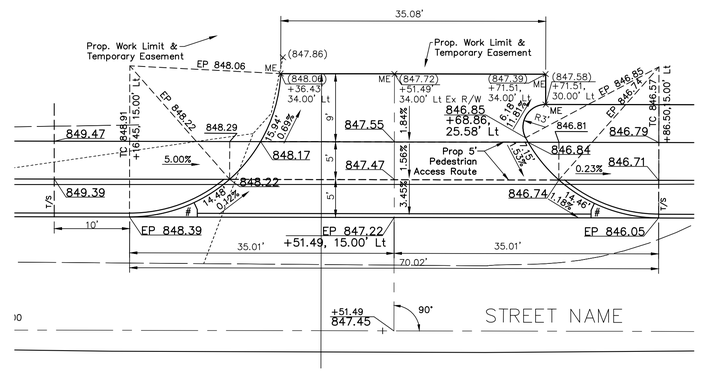
Curb return and taper data is shown to face of curb in curb areas and edge of pavement in pavement areas.

All elevations shown are to finished pavement unless otherwise noted.



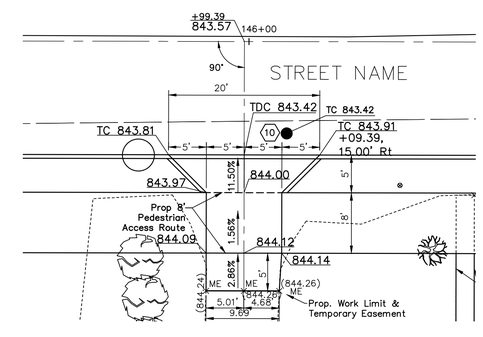
Commercial Drive @ 140+78.14 Rt.

Scale: 1"=10'



Commercial Drive @ 141+51.49 Lt.

Scale: 1"=10'



Residential Drive @ 145+99.39 Lt.

Scale: 1"=10'

HORIZ. SCALE 10 0 5 10

CALCULATED

CHECKED

DRIVEWAY

PROJECT NAME

XXXX-E

X/XX

REVISED 5/16/14

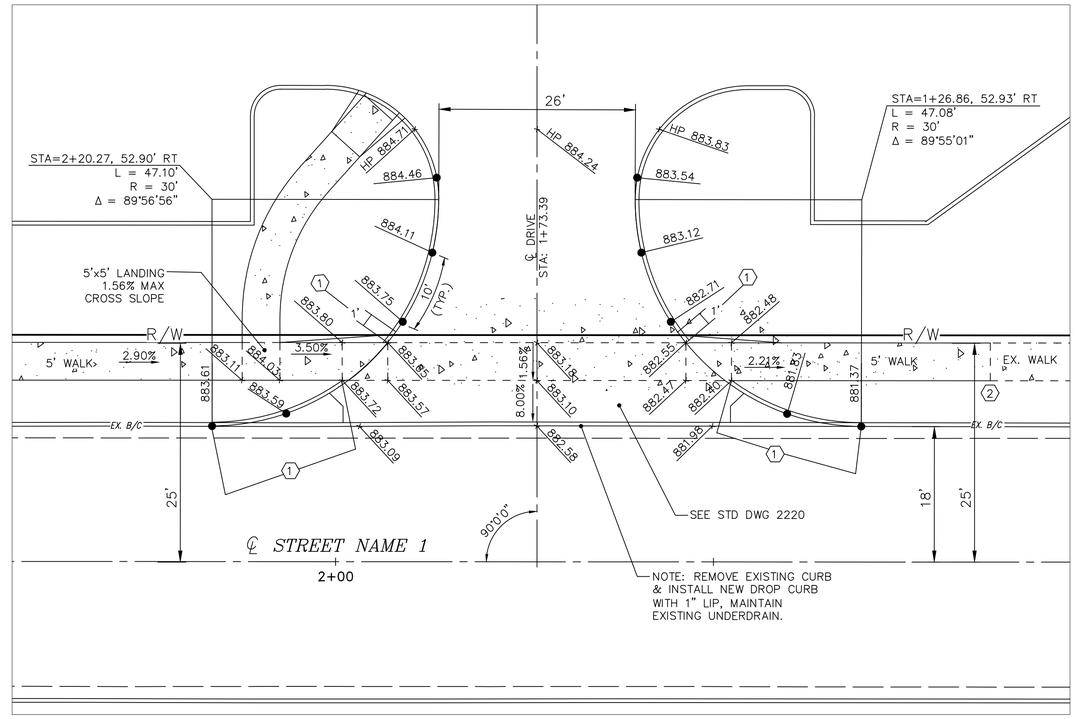
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\11_05 Detail Drive (CIP).dwg (Detail Drive (CIP))

LEGEND

NOTES:
ALL SPOT ELEVATIONS SHOWN ALONG THE CURB REPRESENT THE BOTTOM OF CURB ELEVATION.

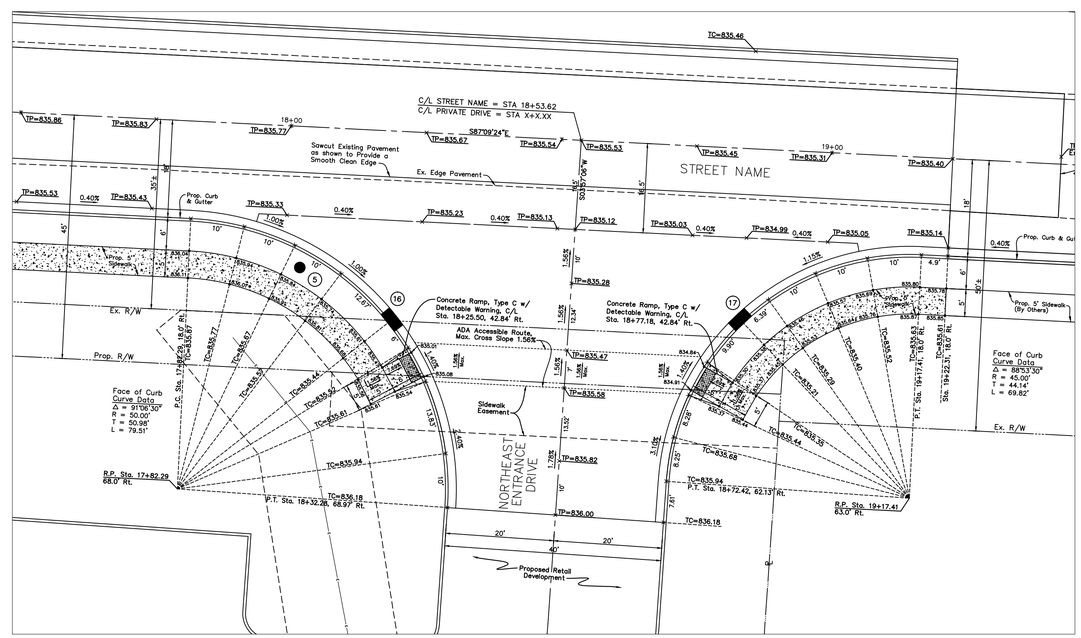
CONCRETE

KEYED NOTES:
1. TAPER CURB FROM 6" TO 0" IN DISTANCE SHOWN
2. SAWCUT EXISTING SIDEWALK AT NEAREST JOINT & INSTALL EXPANSION JOINT



Drive designed as Commercial Drive per Std Dwg 2203 (drop curb w/ 1" lip)

DETAIL – DRIVE STREET NAME 1 @ STATION 1+73.39



Drive designed as a Private Street (No drop curb)

DETAIL – DRIVE STREET NAME 1 @ STATION 18+53.62

Revised 5/12/14
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\11_10 Detail Drive (Curbed Road).dwg (Detail-Drives (Curbed Road))

5 0 5 10 15

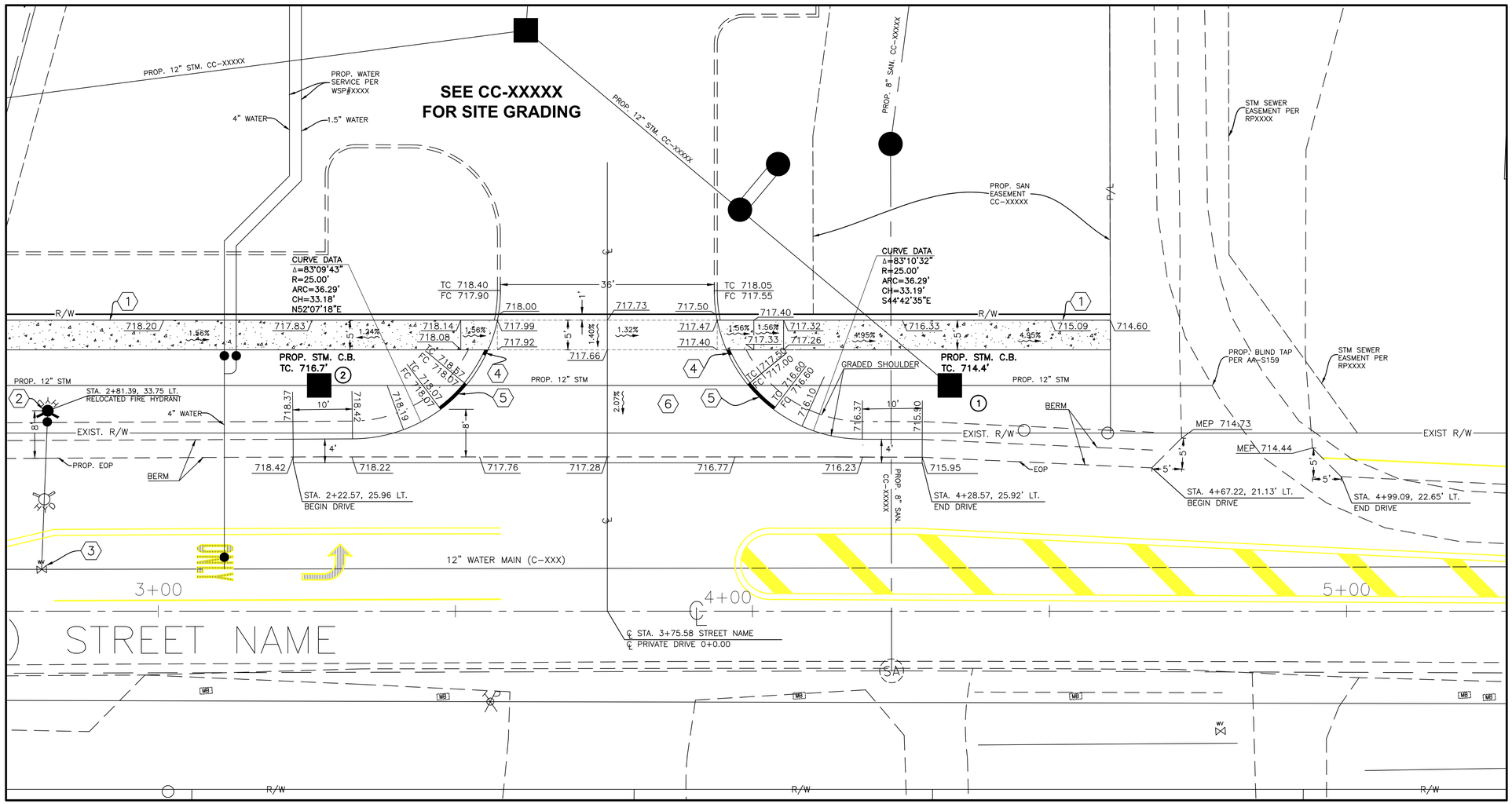
CALCULATED ABC
CHECKED ABC

DETAIL–DRIVE
CURBED STREET

PROJECT NAME

XXXX–E

X
XX



DETAIL - DRIVE - STREET NAME
@ ℄ STA. 3+75.58

SCALE: 1"=10'

PROPOSED STORM STRUCTURES				
REFERENCE SHEET	NO.	STATION	OFFSET	DESCRIPTION
17	1	4+33.22	38.0' LT	CATCH BASIN, AA-S133
17	2	3+27.08	38.0' LT	CATCH BASIN, AA-S133

KEYED NOTES

1. PROPOSED STANDARD SIDEWALK PER STD DWG 2300.
2. PROPOSED FIRE HYDRANT (TYPE 'A'). CONTRACTOR TO REUSE EXISTING FIRE HYDRANT IF PERMITTED BY DOPW (WATER).
3. EXISTING WATER VALVE. ADJUST TO GRADE.
4. TAPER CURB FROM 6" TO 0" OVER 2'
5. TAPER CURB FROM 6" TO 0" OVER 6'
6. PAVEMENT BUILDUP FOR DRIVE PER STD DWG 2208
   ITEM 448 – 4" Asphalt Concrete, Surface Course (Medium Traffic) PG64–22
   ITEM 448 – 4" Asphalt Concrete, Intermediate Course (Medium Traffic) PG64–22
   ITEM 304 – 4" Aggregate Base

STANDARD ABBREVIATIONS	
XXX.XX	= PROPOSED PAVEMENT GRADE ELEVATION
TC XXX.XX / FC XXX.XX	= PROPOSED TOP OF CURB/FACE OF CURB ELEVATION
METC XXX.XX	= MEET EXISTING TOP OF CURB
MEP XXX.XX	= MEET EXISTING PAVEMENT
EX XXX.XX	= EXISTING GRADE
EX XXX.XX(TC)	= EXISTING TOP OF CURB GRADE

LEGEND

- EXIST. SANITARY MANHOLE
- EXIST. STORM MANHOLE
- EXIST. CATCH BASIN
- EXIST. GAS VALVE
- EXIST. WATER VALVE
- EXIST. FIRE HYDRANT
- EXIST. POWER POLE
- EXIST. LIGHT POLE
- EXIST. GUY POLE
- EXIST. TRAFFIC SIGN
- EXIST. TRAFFIC LIGHT
- OTL — OEL — EXIST. OVERHEAD ELECTRIC/TELEPHONE LINE
- EX GAS — EXIST. GAS LINE
- Ex San — EXIST. SANITARY LINE
- Ex Storm — EXIST. STORM LINE
- Ex Water — EXIST. WATER LINE

HORIZ. SCALE 50 0 25 50

CALCULATED | CHECKED

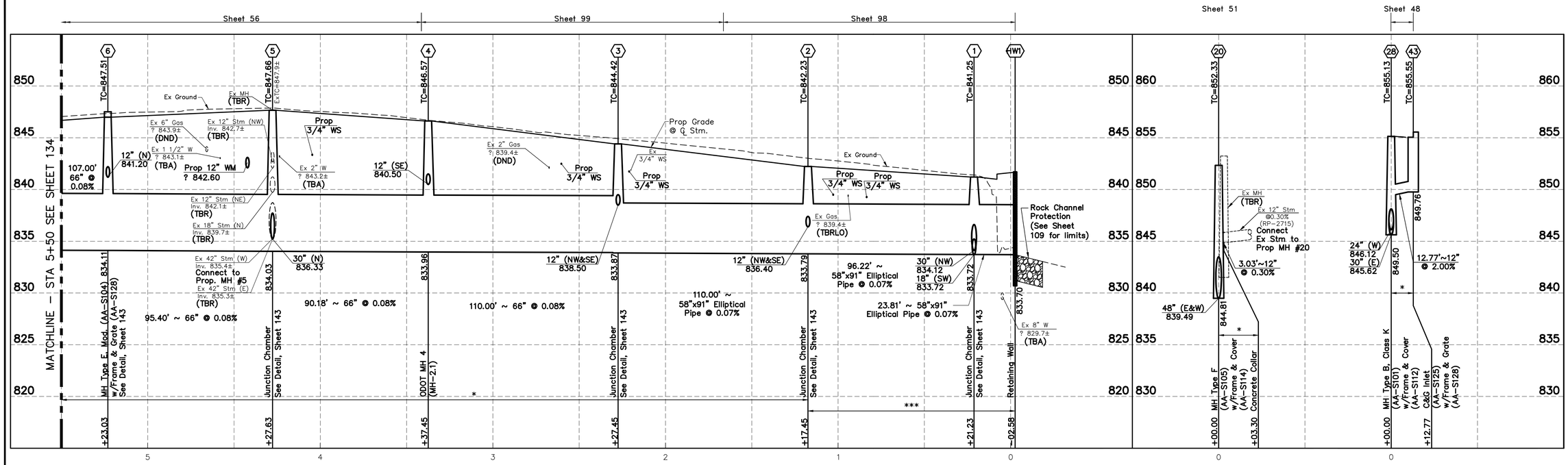
DETAIL – DRIVE
NON-CURBED STREET

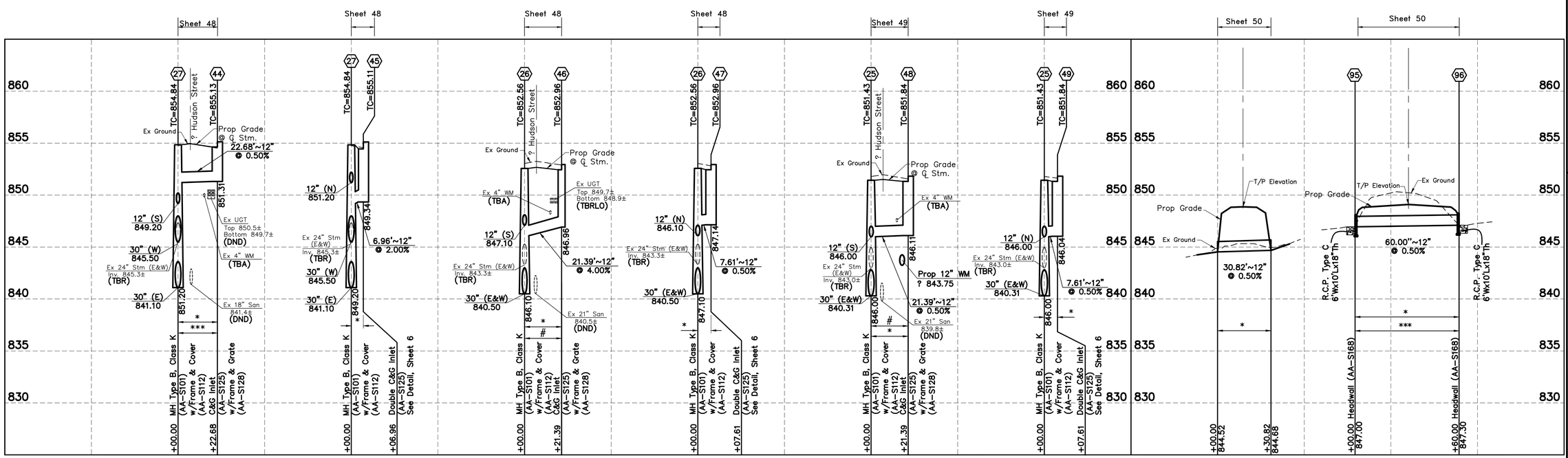
PROJECT NAME

XXXX–E

X/XX

Revised 5/16/14
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\11_11 Detail Drive (Non-Curbed Road)\Non-Curbed Road).dwg (Detail-Drives (Non-Curbed Road))





NOTE: For Curb & Gutter Inlets, TC = Top of Curb = Top of Casting

* Compacted Granular Backfill Per Item 912
** Backfill Per Item 911
*** Concrete Encasement Per Item 910
\# Watertight joints per 901.15 and place trench dams per 901.11

Residential Drive at Street Name X (14+45.55, Lt)

Commercial Drive at Street Name X (50+14.57, Rt)

HORIZ. 30 0 15 30
VERTICAL SCALE 5 0 2.5 5

CALCULATED

CHECKED

STORM SEWER PROFILES

PROJECT NAME

XXXX-E

X / XX

REVISED 11/3/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\12_05 STORM SEWER PROFILE.dwg (Storm Profiles)

STORM SEWER COORDINATE DATA							
PROPOSED					AS BUILT		
PHASE	STRUCTURE	NORTHING	EASTING	ELEVATION	NORTHING	EASTING	ELEVATION
1	HW1	765443.1428	1868084.5487	XXX.XX			
	1	765463.1414	1868119.1381	XXX.XX			
	2	765515.8380	1868140.5214	XXX.XX			
	3	765623.4468	1868144.0679	XXX.XX			
	4	765641.4017	1868016.9000	XXX.XX			
	5	765744.2256	1868022.9199	XXX.XX			
	6	765854.9803	1868029.4042	XXX.XX			
	7	765950.8717	1868035.0182	XXX.XX			
	8	766068.6700	1868041.9149	XXX.XX			
	9	766234.4419	1868051.6202	XXX.XX			
	10	766227.4869	1868170.4167	XXX.XX			
	11	766296.3689	1868174.4495	XXX.XX			
	12	766387.2134	1868179.7681	XXX.XX			
	13	766394.1684	1868060.9715	XXX.XX			
	14	766551.8983	1868070.2060	XXX.XX			
2	15	766645.0399	1868075.6591	XXX.XX			
	16	766745.6008	1868080.9619	XXX.XX			
	17	766851.6598	1868083.0556	XXX.XX			
1	18	765453.6270	1868144.5450	XXX.XX			
	19	765442.5894	1868173.5139	XXX.XX			
	20	765387.2464	1868171.8527	XXX.XX			
	21	765622.4240	1868161.5380	XXX.XX			
	22	765620.6121	1868192.4850	XXX.XX			
	23	765846.5320	1868174.6587	XXX.XX			
	24	765844.7202	1868205.6057	XXX.XX			
	25	766214.9569	1868196.2285	XXX.XX			
	26	766213.1450	1868227.1755	XXX.XX			
	27	766294.8201	1868200.9042	XXX.XX			
	28	766293.0083	1868231.8512	XXX.XX			
2	29	766752.6450	1868833.2432	XXX.XX			
	30	766758.9864	1868724.9287	XXX.XX			
	31	766760.7982	1868693.9817	XXX.XX			
	32	766761.8650	1868675.7609	XXX.XX			
	33	766768.4254	1868563.7047	XXX.XX			
	34	766826.3468	1868566.7439	XXX.XX			
	35	766777.8152	1868403.3220	XXX.XX			
	36	766837.9665	1868402.4935	XXX.XX			
	37	766943.0988	1868403.6609	XXX.XX			
	38	766723.1954	1868831.5190	XXX.XX			
	39	766692.2484	1868829.7072	XXX.XX			
	40	767113.2193	1868697.0844	XXX.XX			
	41	766732.9559	1868664.8045	XXX.XX			
	42	766702.0089	1868662.9927	XXX.XX			
	43	766732.5518	1868402.2517	XXX.XX			
	44	766702.8258	1868411.0473	XXX.XX			
	45	766845.1246	1868280.2281	XXX.XX			
1	Ex 4	765278.0020	1867824.6270	XXX.XX			
	46	765276.6194	1867844.5792	XXX.XX			
	47	765325.3081	1867876.0976	XXX.XX			
	EW1	765356.7696	1867896.4641	XXX.XX			
	Ex 2	765374.4739	1867690.9458	XXX.XX			
	48	765501.2345	1867710.4558	XXX.XX			
	HW2	765509.1319	1867762.5710	XXX.XX			

STORM SEWER DATA				
PHASE	STRUCTURE	DIRECTION	DISTANCE	SIZE
1	HW1-1	N 59°57'53" E	39.95'	36"
	1-2	N 22°05'11" E	56.87'	36"
	2-3	N 01°53'16" E	107.67'	30"
	3-4	N 81°57'49" W	128.43'	30"
	4-5	N 03°21'02" E	103.00'	30"
	5-6	N 03°21'02" E	110.94'	30"
	6-7	N 03°21'02" E	96.06'	30"
	7-8	N 03°21'02" E	118.00'	30"
	8-9	N 03°21'02" E	166.06'	30"
	9-10	S 86°38'58" E	119.00'	24"
	10-11	N 03°21'02" E	69.00'	24"
	11-12	N 03°21'02" E	91.00'	24"
	12-13	S 86°38'58" E	119.00'	24"
	13-14	N 03°21'02" E	158.00'	18"
2	14-15	N 03°21'02" E	93.30'	15"
	15-16	N 03°01'07" E	100.70'	15"
	16-17	N 01°07'51" E	106.08'	15"
1	1-18	S 69°28'12" E	27.13'	18"
	18-19	S 69°28'12" E	31.00'	15"
	19-20	S 01°43'10" W	55.37'	12"
	3-21	N 86°38'58" W	17.50'	12"
	21-22	S 86°38'58" E	31.00'	12"
	6-23	S 86°40'17" E	145.50'	12"
	23-24	S 86°38'58" E	31.00'	12"
	10-25	S 64°06'23" E	28.69'	12"
	25-26	S 86°38'58" E	31.00'	12"
	11-27	S 86°38'58" E	26.50'	15"
	27-28	S 86°38'58" E	31.00'	12"
2	Ex 3B-29	N 86°38'58" W	17.00'	36"
	29-30	N 86°38'58" W	108.50'	36"
	30-31	N 86°38'58" W	31.00'	36"
	31-32	N 86°38'58" W	18.25'	36"
	32-33	N 86°38'58" W	112.25'	36"
	33-34	N 03°00'13" E	58.00'	30"
	33-35	N 86°38'58" W	160.66'	30"
	35-36	N 00°47'21" W	60.16'	24"
	36-37	N 00°38'10" E	105.14'	24"
	29-38	S 03°21'02" W	29.50'	12"
	38-39	S 03°21'02" W	31.00'	12"
	32-40	N 03°28'23" E	352.00'	15"
	32-41	S 20°45'23" W	30.92'	12"
	41-42	S 03°21'02" W	31.00'	12"
	35-43	S 01°21'16" W	45.28'	12"
	43-44	S 16°28'58" E	31.00'	12"
	36-45	N 86°38'58" W	122.47'	12"
1	Ex 4-46	S 86°02'09" E	20.00'	24"
	46-47	N 32°55'01" E	58.00'	18"
	47-EW1	N 32°55'01" E	37.48'	12"
	Ex 2-48	N 8°44'59" E	128.25'	18"
	48-HW2	N 81°22'59" E	52.71'	12"

* Horizontal Reference Datum = NAD 83 (1986 Adj.) (Ohio South Zone)

HORIZ. SCALE

CALCULATED

CHECKED

STORM SURVEY COORDINATE DATA

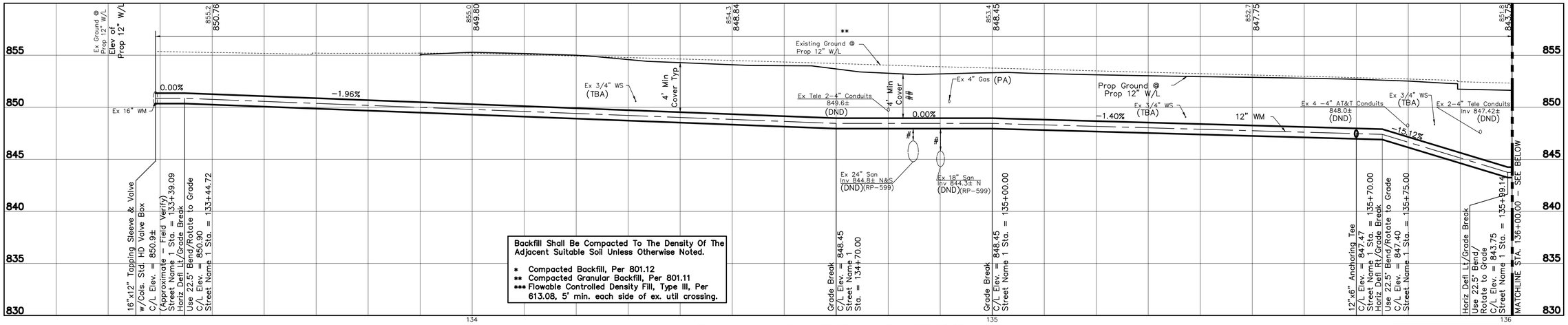
PROJECT NAME

X / XX

XXXX-E

REVISED 12/2/11

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\12-10 COORDINATE DATA (STORM).dwg (Coord Data)



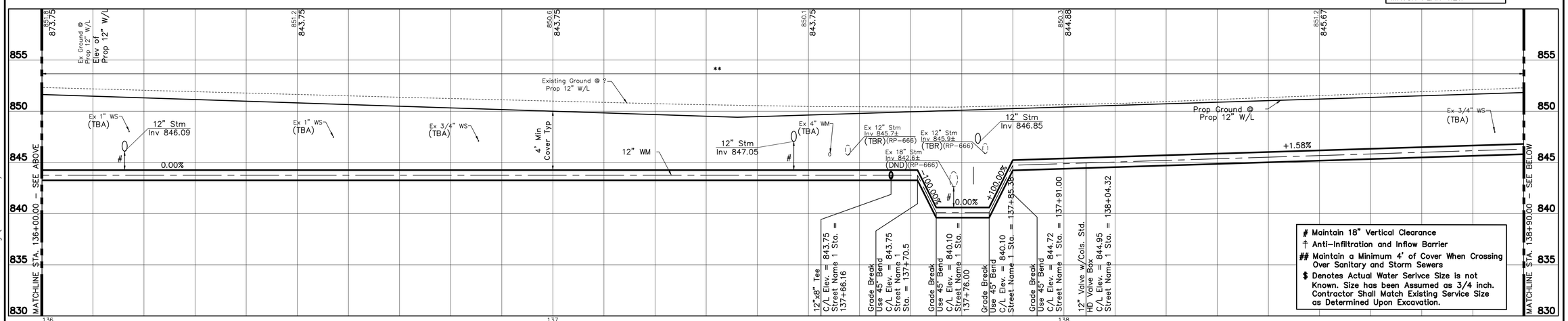
Backfill Shall Be Compacted To The Density Of The Adjacent Suitable Soil Unless Otherwise Noted.

* Compacted Backfill, Per 801.12
** Compacted Granular Backfill, Per 801.11
*** Flowable Controlled Density Fill, Type III, Per 613.08, 5' min. each side of ex. util crossing.

Street Name 1 – Sta. 133+39.44 to Sta. 136+00.00

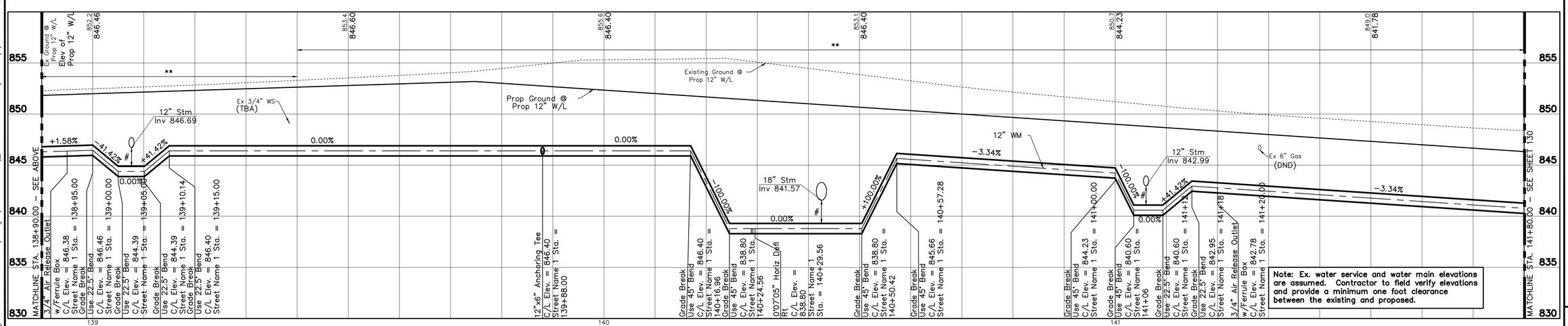
NOTE TO CONSULTANTS:

SCALE OF PROFILE SHOULD MATCH PLAN VIEW



Maintain 18" Vertical Clearance
† Anti-Infiltration and Inflow Barrier
Maintain a Minimum 4' of Cover When Crossing Over Sanitary and Storm Sewers
$ Denotes Actual Water Serivce Size is not Known. Size has been Assumed as 3/4 inch. Contractor Shall Match Existing Service Size as Determined Upon Excavation.

Street Name 1 – Sta. 136+00.00 to Sta. 138+90.00



Note: Ex. water service and water main elevations are assumed. Contractor to field verify elevations and provide a minimum one foot clearance between the existing and proposed.

Street Name 1 – Sta. 138+90.00 to Sta. 141+80.00

HORIZ. 10 0 5 2.5
VERTICAL SCALE 10 5 0 5

CALCULATED
CHECKED

WATER PROFILE – STREET NAME 1 – STA. 133+39.44 TO STA. 141+80.00

PROJECT NAME

REVISED 6/25/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\13_01 WATER PROFILE.dwg (Water Profile)

X/XX

XXXX-E

STREET NAME 1

See Sheet 48			AS-BUILT		
REF	ITEM	STATION	NORTHING	EASTING	ELEVATION
1	16"x12" Tapping Sleeve	133+39.09			
2	12" Water Main Valve	133+39.00			
3	12" 22.5° Bend (Horiz)	133+44.72			
4	3/4" WS (Short) (ADDRESS)	134+30.00	*	*	*
5	Grade Break Use Joint Defl (Vert)	134+70.00			
6	Grade Break Use Joint Defl (Vert)	135+00.00			
7	3/4" WS (Long) (ADDRESS)	135+23.00			

See Sheet 49	STREET NAME 1				
2	3/4" WS (Short) (ADDRESS)	135+38.00			
3	3/4" WS (Long) (ADDRESS)	135+57.00			
4	12"x6" Anchor Tee	135+70.00			
5	6" Fire Hydrant Valve	135+70.00			
6	Fire Hydrant	135+75.60			
7	3/4" WS (Long) (ADDRESS)	135+95.00			
8	12" 22.5° Bend (Horiz)	135+99.14			
9	1" WS (Short) (ADDRESS)	136+20.00			
	3/4" WS (Long) (ADDRESS)	136+28.00			
10	1" WS (Short) (ADDRESS)	136+58.00			
11	3/4" WS (Long) (ADDRESS)	136+68.00			
12	3/4" WS (Short) (ADDRESS)	136+85.00			

See Sheet 50	STREET NAME 1				
1	3/4" WS (Long) (ADDRESS)	137+34.00			
2	12"x8" Tee	137+66.16			
3	12" 45° Bend (Vert)	137+71.35			
4	12" 45° Bend (Vert)	137+75.00			
5	12" 45° Bend (Vert)	137+85.38			
6	12" 45° Bend (Vert)	137+90.00			
7	3/4" WS (Long) (ADDRESS)	137+99.00			
8	12" Water Main Valve w/ Cols. Std HD Valve Box	138+04.32			
9	3/4" WS (Long) (ADDRESS)	138+21.00			
10	3/4" WS (Short) (ADDRESS)	138+83.00			
11	3/4" ARO w/ Ferrule Box	138+95.00			
12	12" 22.5° Bend (Vert)	139+00.00			
13	12" 22.5° Bend (Vert)	139+05.00			
14	12" 22.5° Bend (Vert)	139+10.14			
15	12" 22.5° Bend (Vert)	139+15.00			

See Sheet 51	STREET NAME 1				
1	3/4" WS (Short) (ADDRESS)	139+37.00			
2	12"x6" Anchor Tee	139+88.00			
3	6" Fire Hydrant Valve	139+88.00			
4	Fire Hydrant	139+93.00			
5	Horiz Bend Use Joint Defl	140+29.56			
6	12" 45° Bend (Vert)	140+50.42			
7	12" 45° Bend (Vert)	140+57.28			
8	12" 45° Bend (Vert)	141+00.00			
9	12" 45° Bend (Vert)	141+03.63			
10	12" 45° Bend (Vert)	141+09.32			
11	12" 45° Bend (Vert)	141+15.00			
12	3/4" ARO w/ Ferrule Box	141+20.00			

See Sheet 52	STREET NAME 1				
1	12" 11.25° Bend (Vert)	142+12.27			
2	12"x8" Tee	142+17.55			
3	2" WS (Long) (ADDRESS)	142+21.00			
4	12" 11.25° Bend (vert)	142+46.46			
5	12" 45° Bend (Vert)	142+61.30			
6	12" 45° Bend (Vert)	142+65.00			
7	12" Water Main Valve w/ Cols. Std HD Valve Box	142+74.09			

See Sheet 55	STREET NAME 1				
1	12" 22.5° Bend (Vert)	147+27.50			
2	12" 22.5° Bend (Vert)	147+32.67			
3	3/4" WS (Long) (ADDRESS)	147+73.00			
4	3/4" WS (Short) (ADDRESS)	147+76.00			
5	3/4" WS (Long) (ADDRESS)	147+87.00			
6	12" 22.5° Bend (Vert)	147+98.73			
7	12" 22.5° Bend (Vert)	148+02.50			
8	12" 22.5° Bend (Vert)	148+07.50			
9	12" 22.5° Bend (Vert)	148+12.50			

See Sheet 98	STREET NAME 2		AS-BUILT		
REF	ITEM	STATION	NORTHING	EASTING	ELEVATION
1	3/4" WS (Short) (ADDRESS)	126+78.00			
2	12" 22.5° Bend (Vert)	126+78.32			
3	12" 22.5° Bend (Vert)	126+83.50			
4	12" 22.5° Bend (Vert)	126+88.50			
5	12" 22.5° Bend (Vert)	126+94.46			
6	3/4" WS (Short) (ADDRESS)	127+19.00			

See Sheet 56	STREET NAME 2				
1	Grade Break Use Joint Defl (Vert)	128+21.01			
2	3/4" WS (Long) (ADDRESS)	128+62.00			
3	12" Water Main Valve w/ Cols. Std HD Valve Box	128+68.00			
4	12" 11.25° Bend (Vert)	128+73.00			
5	12" 11.25° Bend (Vert)	128+78.53			
6	12" 11.25° Bend (Vert)	128+89.52			
7	12" 11.25° Bend (Vert)	128+94.80			
8	12" 11.25° Bend (Horiz)	129+04.88			
9	8" Water Main Valve w/ Cols. Std HD Valve Box	129+30.77			
10	12" 22.5° Bend (Vert)	129+75.00			
11	3/4" WS (Long) (ADDRESS)	129+80.00			
12	12" 22.5° Bend (Vert)	129+82.48			
13	12" 22.5° Bend (Vert)	129+87.48			
14	12" 22.5° Bend (Vert)	129+95.00			

See Sheet 100	STREET NAME 3				
1	3/4" WS (Short) (ADDRESS)	30+50.00			
2	2" WS (Long) (ADDRESS)	30+68.00			
3	8" Water Main Valve w/ Cols. Std HD Valve Box	30+90.00			
4	12" 45° Bend (Horiz)	31+00.00			
5	12" 45° Bend (Horiz)	31+13.18			

See Sheet 50	STREET NAME 4				
1	8" Water Main Valve w/ Cols. Std HD Valve Box	0+23.50			
2	8" 45° Bend (Horiz)	0+35.90			
3	8"x6" Reducer	0+38.73			
4	6" 45° Bend (Horiz)	0+40.90			

Horizontal Reference Datum = NAD 83 (NSRS 2007) (Ohio South Zone)

LEGEND

ARO	Air Release Outlet
WS	Water Service
HD	Heavy Duty
Horiz	Horizontal
Vert	Vertical
Defl	Deflection

* NOTE: PROVIDE COORDINATES AND ELEVATIONS OF WATER SERVICES AT THE CURB STOP.

CALCULATED ABC
CHECKED ABC

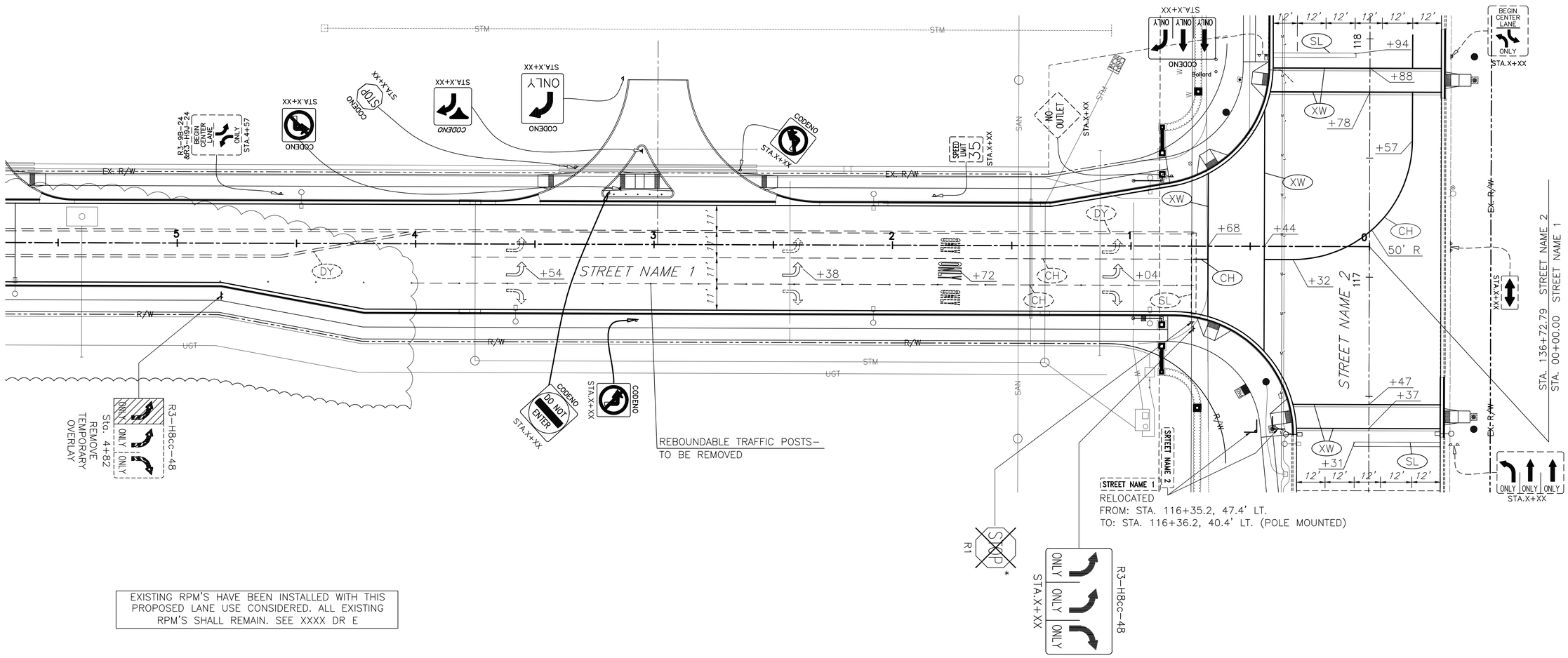
WATERLINE SURVEY COODINATE DATA

PROJECT NAME

XX

XXXX-E

REVISED 6/25/14
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\13_05 COORDINATE DATA (WATER).dwg (Coord Data)



*STOP SIGN SHALL REMAIN UNTIL NEW SIGNAL IS IN OPERATION.

EXISTING RPM'S HAVE BEEN INSTALLED WITH THIS PROPOSED LANE USE CONSIDERED. ALL EXISTING RPM'S SHALL REMAIN. SEE XXXX DR E

LEGEND

- (CH) PROPOSED PAVEMENT MARKINGS
- (DY) EXISTING PAVEMENT MARKINGS (TO REMAIN)
- PROPOSED SIGN
- EXISTING SIGN

LINE SPECIFICATIONS

WE	EDGE LINE, WHITE	SL	STOP LINE, 20" WHITE
YE	EDGE LINE, YELLOW	XW	CROSSWALK LINE, 10" WHITE
LL	LANE LINE, 5" YELLOW	WT	TRANSVERSE LINE, 20" WHITE
DY	CENTER LINE, 5" SOLID DOUBLE (5")	YT	TRANSVERSE LINE, 20" YELLOW
		WCM	CURB MARKING, WHITE
		YCM	CURB MARKING, YELLOW
CSD	CENTER LINE, 5" SOLID & DASHED (5")	WIM	ISLAND MARKING, WHITE
		YIM	ISLAND MARKING, YELLOW
		WD	DOTTED LINE, 4" WHITE
CD	CENTER LINE, 5" DASHED SINGLE	YD	DOTTED LINE, 4" YELLOW
CH	CHANNELIZING LINE, 10" WHITE	RM	REMOVAL OF PAVEMENT MARKINGS

SUB-SUMMARY OF TRAFFIC CONTROL ITEMS

ITEM NUMBER	QUANTITY	UNIT	ITEM DESCRIPTION	REFERENCE SHEET
202	43	EA	RAISED PAVEMENT MARKER REMOVED	
621	52	EA	RPM	
630	112	LF	GROUND MOUNTED SUPPORT, NO 3 POST, AS PER PLAN	
630	32.5	SF	SIGN, FLAT SHEET, TYPE G, AS PER PLAN	5
630	5	EA	REMOVAL OF GROUND MOUNTED SUPPORT AND DISPOSAL	
630	3	EA	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
644	164	LF	CENTER LINE, 5", SOLID DOUBLE	
644	868	LF	CHANNELIZING LINE	
644	64	LF	STOP LINE	
644	380	LF	CROSSWALK LINE	
644	11	EA	LANE ARROW	
644	4	EA	WORD ON PAVEMENT	
644	133	LF	DOTTED LINE, 4"	
644	1171	LF	REMOVAL OF PAVEMENT MARKINGS	
644	3	EA	REMOVAL OF PAVEMENT MARKINGS	

PAVEMENT MARKING AND SIGNING

PROJECT NAME

XXXX-E

X/XX

REVISED 12/2/11

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Street A at Street C	Street A at Street B	ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION *
					TRAFFIC SIGNAL
223	20	625	243	LF	Conduit, Concrete Encased, 2", 725.051
133	159	625	292	LF	Conduit, Concrete Encased, 3", 725.051
248	419	625	667	LF	Conduit, 2", 725.051
230	290	625	520	LF	Trench, 30" Deep
134	74	625	208	LF	Trench, 36" Deep
2	1	625	3	Each	Pull Box, 725.08, 27"
2		625	2	Each	Pull Box, 725.08, 32"
	3	625	3	Each	Pull Box, 725.06, 13"x24"
10	11	625	21	Each	Ground Rod
341	273	625	614	LF	No. 4 AWG, 600 Volt Distribution Cable, As Per Plan
3		625	3	Each	Bracket Arm, 25'
1		625	1	Each	Bracket Arm, 30'
1	1	630	2	Lump	Signing, Misc.: Traffic Signal Signs
4	4	630	8	Each	Sign Support Assembly, Pole Mounted, As Per Plan
	1	632	1	Each	Conduit Riser, 2" Diameter, 725.05, SCH 80
6	6	632	12	Each	Vehicular Signal Head, (LED), 3-Section, 12" Lens, 1-Way
2	4	632	6	Each	Vehicular Signal Head, (LED), 5-Section, 12" Lens, 1-Way
8	8	632	16	Each	Pedestrian Signal Head, (LED), (Countdown)
4	4	632	8	Each	Pedestrian Pushbutton
8	10	632	18	Each	Covering Of Vehicular Signal Head
8	8	632	16	Each	Covering Of Pedestrian Signal Head
4	4	632	8	Each	Covering Of Pedestrian Pushbutton
4		632	4	Each	Signal Support Foundation
4	6	632	10	Each	Pedestal Foundation
1		632	1	Each	Signalization Misc.: Sleeve For Anchor Base Foundation
	1	632	1	Each	Pedestal Support, 5', Transformer Base
4	5	632	9	Each	Pedestal Support, 10.7', Transformer Base
	1	632	1	Each	Pedestrian Pedestal, Relocated
4		632	4	Each	Combination Signal Support, Type 4120, Design 4
	3	632	3	Each	Strain Pole, Type 4170, Design 8
	3	632	3	Each	Strain Pole Foundation
1	1	632	2	Each	Removal Of Traffic Signal Installation, As Per Plan
1268	948	632	2216	LF	Signal Cable, 7-Conductor, No. 14, Awg
207	804	632	1011	LF	Signal Cable, 9-Conductor, No. 14, Awg
	310	632	310	LF	Messenger Wire, 7 Strand, 3/8" Diameter with Acessories
537	2982	632	3519	LF	Loop Detector Lead-In Cable
	5	632	5	Each	Detector Loop
34	68	632	102	LF	Power Cable, 2-Conductor, No. 6 AWG
	123	632	123	LF	Service Cable, 2-Conductor, No. 6 AWG
1		632	1	Each	Signalization, Misc.: Video Detection System
1	1	633	2	Each	Cabinet Foundation
1	1	633	2	Each	Controller Unit With Cabinet 8 PH, P44, Base Mounted
	1	633	1	Each	Controller Work Pad

* – ITEM DESCRIPTIONS ARE SHOWN FOR EXAMPLE PURPOSES ONLY.
ACTUAL ITEM DESCRIPTIONS USED WILL VARY BY PROJECT

REVISED 4/11/14
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SCALE None
CALCULATED XXX
CHECKED XXX

TRAFFIC SIGNAL INSTALLATION
GENERAL SUMMARY

PROJECT NAME

XX
XX

XXXX E

VEHICULAR TRAFFIC SIGNAL HEAD CONFIGURATION

HEADS 3 & 4 | HEADS 2,5,8,10 | HEAD 6 | HEADS 1,7,9

PEDESTRIAN SIGNAL HEAD CONFIGURATION

N S E W

STREET NAME SIGN DETAIL

Street Name

Pole Mt'd. (A)

FOR INTERSECTION LAYOUT NOTES SEE SHEET ##.

W3-H10-30 SIGNAL OPERATION CHANGED — Span Mt'd. (A)

R10-3A-9 (L) PUSH BUTTON TO CROSS STREET WAIT FOR

R10-5-30 LEFT ON GREEN ARROW ONLY — Span Mt'd. (B)

R10-3A-9 (R) PUSH BUTTON TO CROSS STREET WAIT FOR

LEGEND

SIGNAL HEADS: PROP. VEHICULAR; EX. VEHICULAR; PROP. PEDESTRIAN; EX. PEDESTRIAN

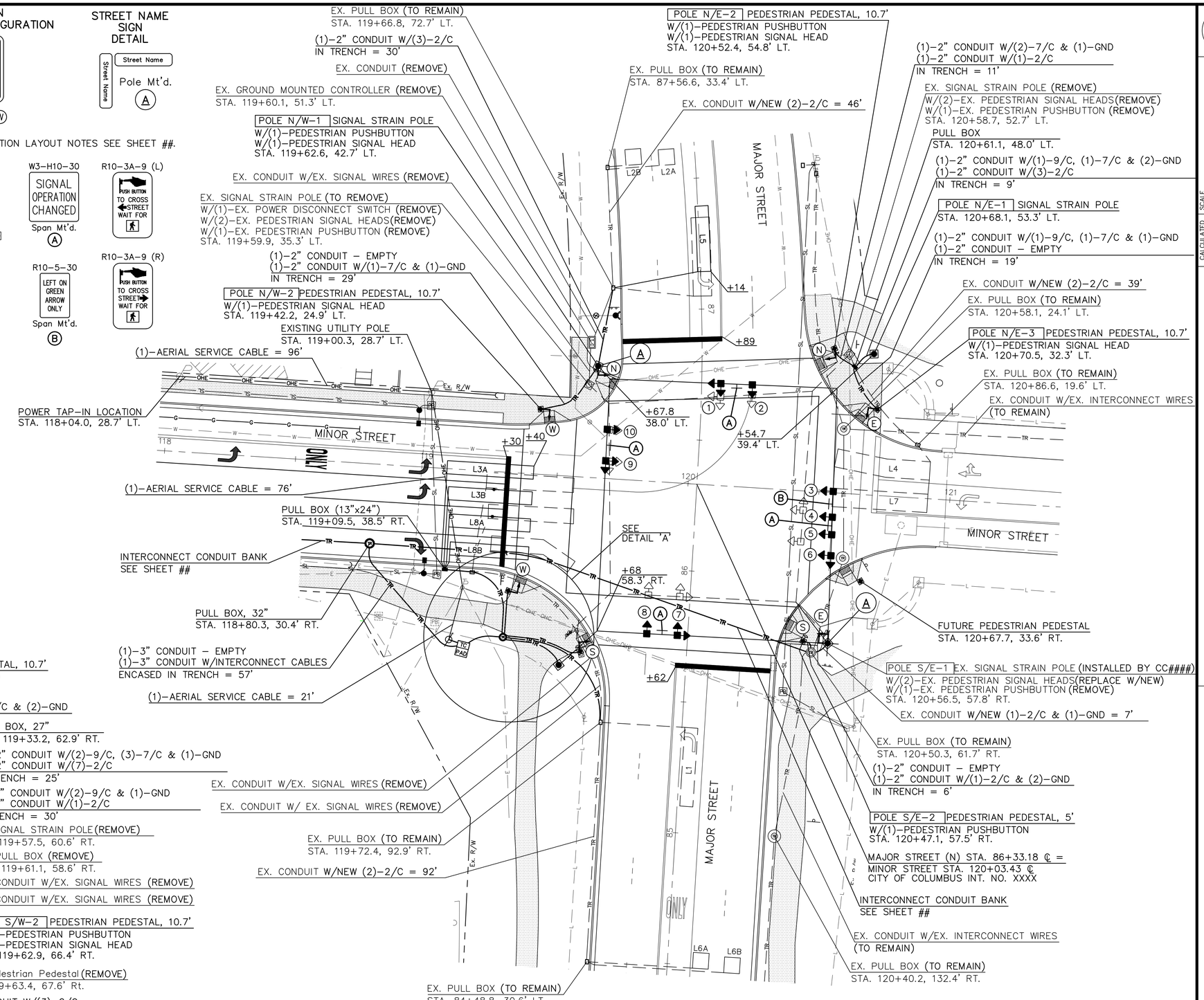
SIGNAL POLES: PROP. ANCHOR/STRAIN POLE; EX. ANCHOR/STRAIN POLE; EX. EMBEDDED POLE; EX. WOOD POLE; GUY ANCHOR; PROP. PEDESTAL; EX. PEDESTAL; PUSHBUTTON; EX. MASTARM; PROP. MASTARM

CONTROLLERS & CABINETS: EX. CABINET W/PAD; PROP. CABINET W/PAD; EX. CABINET (NO PAD); PROP. CABINET (NO PAD)

PULL BOXES: EX. PULL BOX; PROP. PULL BOX

DETECTION: FLOW MONITOR; MICROWAVE; RADAR; VIDEO CAMERA; VIDEO ZONE; LOOP DETECTOR

MISCELLANEOUS: REDLIGHT CAMERA; REDLIGHT FLASH



STRAIN POLE / SPAN WIRE EXAMPLE

N

SCALE: 1 inch = 20 feet (0, 10, 20, 40)

CALCULATED XXX | CHECKED XXX

TRAFFIC SIGNAL INSTALLATION PLAN
STREET A AT STREET B

PROJECT NAME

XX/XX

XXXX E

REVISED 4/11/14

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FIELD WIRING HOOK-UP CHART

SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (NBLT)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
	◄Y	ø1 Y	
	◄G	ø1 G	
2 (NB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
3 (EBLT)	◄R	ø3 R	R
	◄Y	ø3 Y	
	◄G	ø3 G	
4 (EBLT)	◄R	ø3 R	R
	◄Y	ø3 Y	
	◄G	ø3 G	
5 (EB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
6 (EBRT)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
	Y►	ø1 Y	
	G►	ø1 G	
7 (SBLT)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
	◄Y	ø5 Y	
	◄G	ø5 G	
8 (SB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
9 (WBLT)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
	◄Y	ø7 Y	
	◄G	ø7 G	
10 (WB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
N	WALK	G ø4-W	OFF
	DON'T WALK	R ø4-DW	
S	WALK	G ø8-W	OFF
	DON'T WALK	R ø8-DW	
E	WALK	G ø6-W	OFF
	DON'T WALK	R ø6-DW	
W	WALK	G ø2-W	OFF
	DON'T WALK	R ø2-DW	

TIMING CHART

PHASE	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MOVEMENT	NBLT	SB	EBLT	WB	SBLT	NB	WBLT	EB
MIN INITIAL	8	23	8	10	8	23	8	10
WALK	0	7	0	7	0	7	0	7
PED CLR	0	17	0	22	0	17	0	22
PASS / EXT	3.7	2.5	3.7	3.7	3.7	2.5	3.7	3.7
YELLOW	3.0	3.9	3.0	3.6	3.0	3.9	3.0	3.6
RED CLR	3.7	1.8	4.2	2.4	3.3	1.8	3.5	2.4
MAX GRN 1	30	50	25	50	30	50	25	50
MAX GRN 2	30	50	25	50	30	50	25	50
PED RECALL	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
VEH RECALL	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
MEMORY	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF

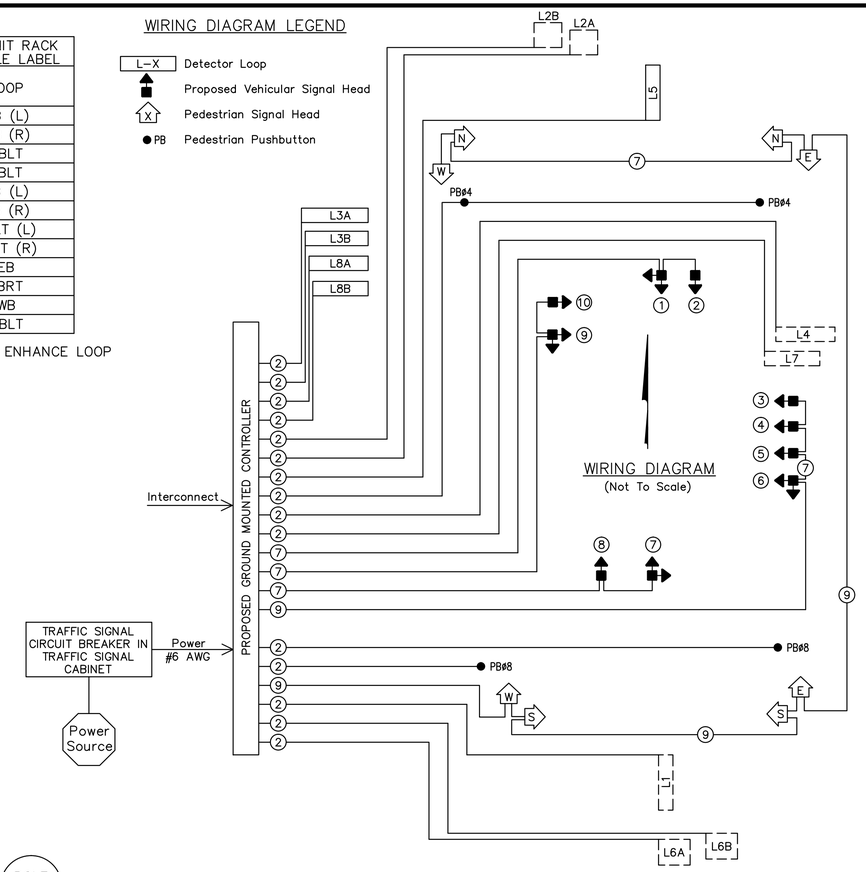
DETECTOR ASSIGNMENTS

DET (#)	DETECTOR ASSIGNMENT UNIT (#)	DETECTOR ASSIGNMENT CHANNEL (#)	PHASE	LOOP SIZE (W'xL')	LOOP DELAY DATA DELAY IN SECONDS	LOOP DELAY DATA INHIBIT DELAY DURING GRN ø	DET UNIT RACK & CABLE LABEL LOOP
L6A	1	1	ø6	Existing	–	–	NB (L)
L6B	1	2	ø6	Existing	–	–	NB (R)
L1	2	1	ø1	Existing	3	ø1	NBLT
L5	2	2	ø5	6'x25'	3	ø5	SBLT
L2A	3	1	ø2	Existing	–	–	SB (L)
L2B	3	2	ø2	Existing	–	–	SB (R)
L3A	4	1	ø3	5'x33'	3	ø3	EBLT (L)
L3B	4	2	ø3	5'x32'	–	ø3	EBLT (R)
L8A	5	1	ø8	5.5'x31'	–	ø8	EB
L8B	5	2	ø8	5'x30'	12	ø8	EBRT
L4	6	1	ø4	Existing	–	ø4	WB
L7	6	2	ø7	Existing	3	ø7	WBLT

LOOPS ARE TO BE HOOKED TO THE UNIT AND CHANNEL AS INDICATED TO ENHANCE LOOP PERFORMANCE AND DECREASE LOOP CROSSTALK.

WIRING DIAGRAM LEGEND

- L-X Detector Loop
- Proposed Vehicular Signal Head
- X Pedestrian Signal Head
- ● PB Pedestrian Pushbutton



ITEM 632 REMOVAL OF TRAFFIC EXISTING SIGNAL INSTALLATION, AS PER PLAN			
QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED TO 1820 E 17th AV	DISPOSED OF BY PROJECT
2	TRAFFIC PULL BOX	X	
4	PEDESTRIAN PUSHBUTTON	X	
1	SIGNAL WIRES (LUMP SUM)		X
4	FOUNDATIONS		X
1	SIGNAL CONDUIT (LUMP SUM)		X
1	CONTROLLER	X	
1	SPAN WIRE (LUMP SUM)		X
8	PEDESTRIAN SIGNAL HEAD	X	
8	SIGNAL HEADS	X	
1	POWER SERVICE		X
3	SIGNAL POLES	X	
1	PEDESTAL	X	

NOTES:

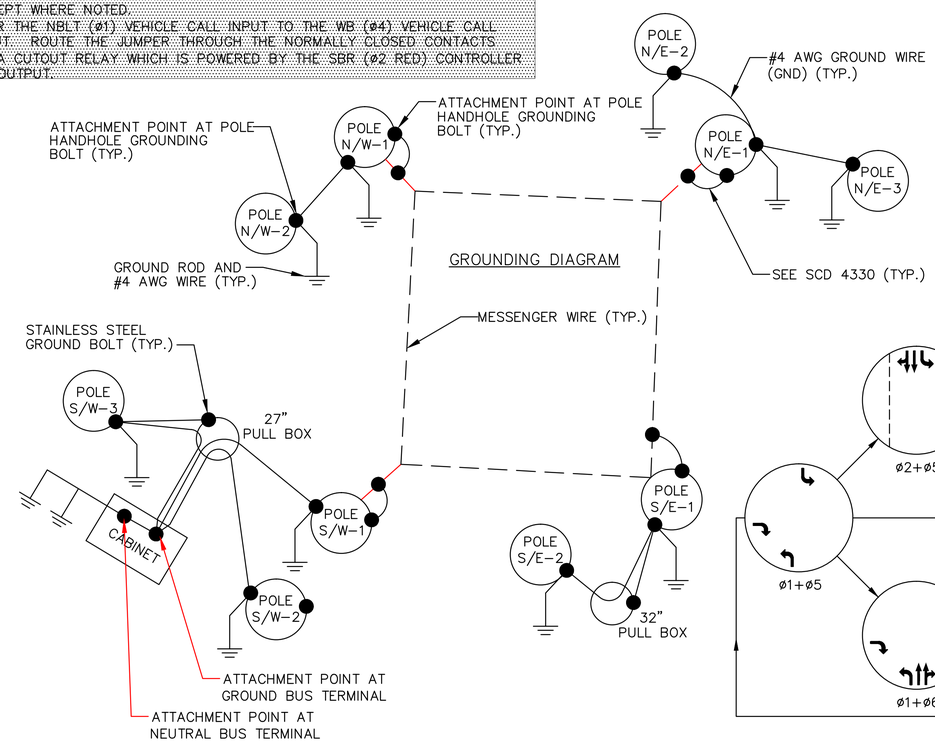
1. SET CONFLICT MONITOR FOR 10 SEC FLASH.
2. LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET.
3. SET ALL PRESENCE LOOP CHANNELS TO COUNT MODE. SET ALL 6'x6' LOOP CHANNELS TO PULSE MODE.
4. ALL LOOP SPADE TERMINALS SHALL HAVE THE LOOP HOMERUN WIRE SOLDERED TO THE SPADE TERMINAL. THE LOOP HOMERUN WIRES SHALL BE TWISTED TOGETHER AS CLOSE TO THE SPADE TERMINAL SCREWS AS POSSIBLE. THE [illegible] THE CLOSEST GROUNDING POI[illegible]NNECTION.
5. BACK PANEL WIR[illegible]
   A) HARD WIRE [illegible] D. HOOK THE DETECTOR [illegible] AS INDICATED. GROUND [illegible]
   B) INSTALL A [illegible] PUT AND ø1 'OMIT' [illegible]TED DURING THE THRO[illegible]
   C) INSTALL A [illegible] PUT AND ø5 'OMIT INP[illegible] DURING THE THROUGH [illegible]
   D) USE DIODES [illegible]ALS.
   E) INSTALL DIO[illegible]WEEN ø4 & ø7 AND ø[illegible]
6. CONTROLLER SOF[illegible]
   A) INITIALIZE IN[illegible]
   B) ENABLE DUAL ENTRY. ACTIVATE ø4 & ø8.
   C) ENABLE SIMULTANEOUS GAP OUT. ACTIVATE ø2, ø4, ø6 & ø8.
7. INTERCONNECT FEEDER CABLE SHALL BE CONTINUOUSLY RUN BETWEEN THE CONTROLLER CABINET AND THE COAX DEVICE. NO SPLICES ARE PERMITTED EXCEPT WHERE NOTED.
8. JUMPER THE NBLT (ø1) VEHICLE CALL INPUT TO THE WB (ø4) VEHICLE CALL INPUT. ROUTE THE JUMPER THROUGH THE NORMALLY CLOSED CONTACTS OF A CUTOUT RELAY WHICH IS POWERED BY THE SBR (ø2 RED) CONTROLLER DC OUTPUT.

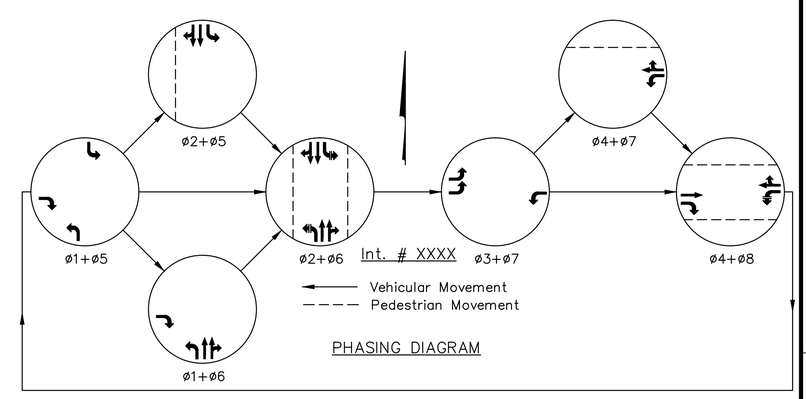
PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.

INTERSECTION LAYOUT NOTES:

1. The Contractor shall ensure that all sidewalks/pathways meet ADA guidelines per City specifications.
2. Power, service and interconnect cable shall be continuous with no splices except as noted.
3. For signing and pavement markings, see sheet(s) XX-XX.
4. Center all loops in the center of their lane unless specified otherwise. Install loops after the asphalt surface course is laid.
5. The top of the pole base foundation shall be edged using a 1/2" sidewalk edger instead of being chamfered.
6. The Transportation Division Personnel shall approve bolt alignment, pole foundation location and elevation prior to the Co[illegible]
7. Tagging of cable in the [illegible] ired except for tagging of certain cable as directed [illegible]
8. The pedestrian signal he[illegible] crosswalk area (not the curb ramp) that is opposite a [illegible] a slight downward angle to it.
9. Do not encase the grou[illegible] in concrete outside of their foundation. Full access [illegible]s. Permanently mark the top of concrete, if visible, wi[illegible] be known by others.
10. Any signal support base [illegible]a shall be flush with the top of the sidewalk.
11. The Contractor shall not [illegible] area is at finished grade.
12. Underground conduit and [illegible]adway areas shall be installed prior to the placement o[illegible] course.
13. The Contractor shall pro[illegible]ween the control cabinet and the designated power so[illegible] shall be run separately and shall not be bundled witl[illegible]
14. See interconnect schema[illegible]
15. For continuation of conduit, see sheet(s) XX.
16. Use a separate conduit for each grouping of cables unless otherwise indicated: one conduit for 120VAC signal cable (5C, 7C, 9C); one conduit for power; one conduit for 2 conductor cable (loop & pushbutton); and one conduit for interconnect cable (twisted pair, fiber optics or coax). Any other low voltage cable not specified above can be placed in the 2 conductor cable conduit. Power cable must be in its own conduit.
17. Unless otherwise specified the following shall apply. A preformed PVC conduit elbow shall be used to change the PVC conduit direction beyond what its natural bending flex would yield. Rigid metal conduit can be bent to form an elbow or any other bending angle required only if a proper conduit bending machine is used. The elbow radius for any non-interconnect conduit shall be 24" or larger when used in a horizontal or vertical manner. Any type of elbow used for interconnect conduit shall have a radius of 36" or larger when used in a horizontal direction or in a vertical direction when the trench is 36" or deeper. If the trench is less than 36" then the vertical elbow radius shall be 24".
18. All clamps and banding material shall be painted to match the signal supports.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.





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XXXX E

TRAFFIC SIGNAL DETAILS
STREET A AT STREET B

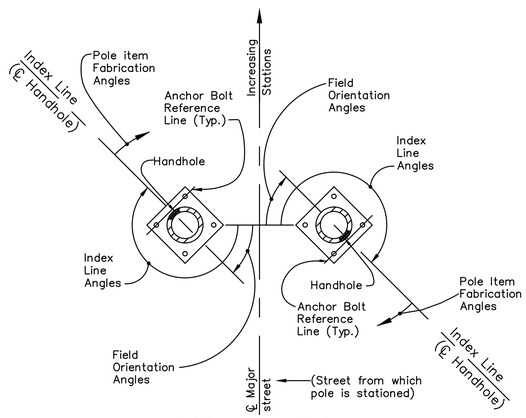
PROJECT NAME

SCALE: None

CALCULATED XXX | CHECKED XXX

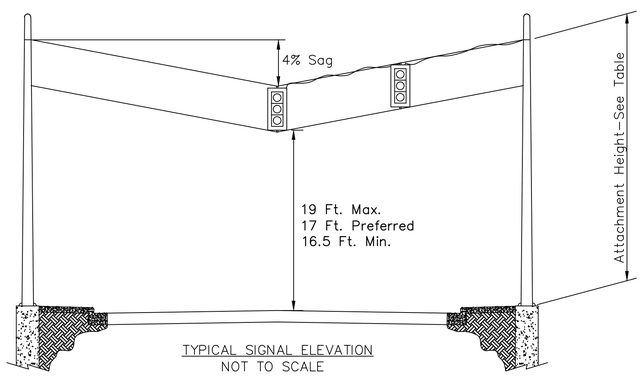
XX / XX

INTERSECTION	SHEET NO.	POLE SIZES & SPAN ATTACHMENT HEIGHT					POLE FABRICATION DATA CLOCKWISE FROM HANDHOLE AT 0 DEGREES						FIELD ORIENTATION			
		POLE DESIGNATION	POLE COLOR	POLE DESIGN NO.	POLE HT. (FT.)	ATTACHMENT HT. (FT.) / SPAN @ HT. (FT.)	ANCHOR BOLT REF. LINE	2" BHC ANGLE–HT. DEG.–FT.	3" BHC ANGLE–HT. DEG.–FT.	PED. SIGNALS	PED. PUSH BUTTON	STREET NAME SIGN	INDEX LINE ANGLE (HANDHOLE)	ANCHOR BOLT REF. LINE	CAPPED FOUNDATION CONDUIT ELL 2" DIA.	FOUNDATION ELEVATION
		S/W–1	Dark Bronze	8	32'	28.5'	90°	–	29' – 180°	–	–	–	225°	135°	225°	726.09
		S/W–2	Dark Bronze	PEDESTAL	10.7'	–	90°	–	–	203°	180°	–	148°	58°	–	726.09
		S/W–3	Dark Bronze	PEDESTAL	10.7'	–	90°	–	–	262°	–	–	198°	108°	–	725.95
STREET A AT STREET B	XXX	N/W–2	Dark Bronze	PEDESTAL	10.7'	–	90°	–	–	99°	–	–	171°	81°	–	726.16
		N/W–1	Dark Bronze	8	30'	27'	90°	28' – 180°	–	223°	251°	135°/225°	134°	44°	134°	725.45
		N/E–2	Dark Bronze	PEDESTAL	10.7'	–	90°	–	–	105°	90°	–	242°	152°	–	728.11
		N/E–1	Dark Bronze	8	32'	28.5'	90°	29' – 180°	–	–	–	–	224°	134°	134°	729.12
		N/E–3	Dark Bronze	PEDESTAL	10.7'	–	90°	–	–	240°	–	–	217°	127°	–	728.66
		S/E–1	Dark Bronze	EXISTING	EX.	26'	EX.	EX.	–	130°/226°	–	135°/225°	135°	EX.	–	728.99
		S/E–2	Dark Bronze	PEDESTAL	5'	–	90°	–	–	–	180°	–	203°	113°	–	727.53



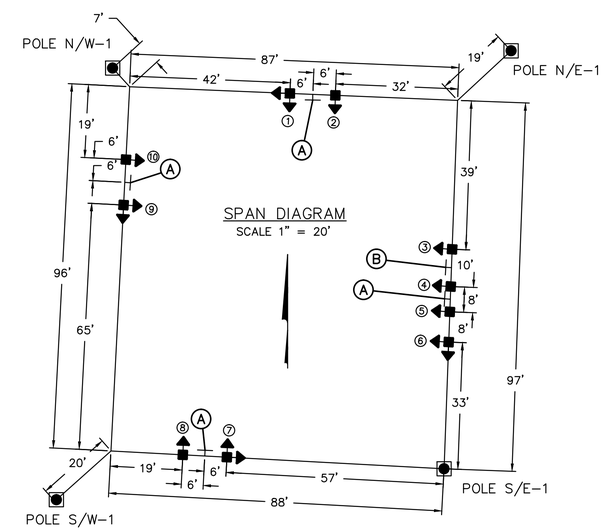
TYPICAL STRAIN POLE ORIENTATION DETAIL
NOT TO SCALE

NOTES:
All angles measured clockwise.
Index line goes through the center of the handhole.



TYPICAL SIGNAL ELEVATION
NOT TO SCALE

NOTES:
1. The lowest signal head height in each direction shall be set at 16.5 feet minimum (17' preferred). Adjust the span accordingly.



NOTES:

1. The lowest signal head height in each direction shall be set at 16.5 feet (17' Preferred). Adjust the span accordingly.
2. The dimensions shown on the span diagram are estimates. Final head positions shall be on the lane line, channel line or on the lane centerline. The distance between the heads are as indicated.

REVISED 4/11/14

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SCALE None

CALCULATED XXX

CHECKED XXX

POLE FABRICATION AND ORIENTATION DETAILS

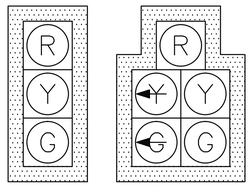
PROJECT NAME

XX / XX

XXXX E

MAST ARM EXAMPLE

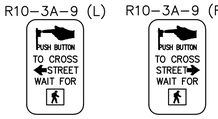
VEHICULAR TRAFFIC SIGNAL HEAD CONFIGURATION



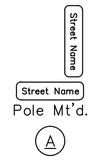
12" HEADS 2, 3, 4, 6, 7 & 8

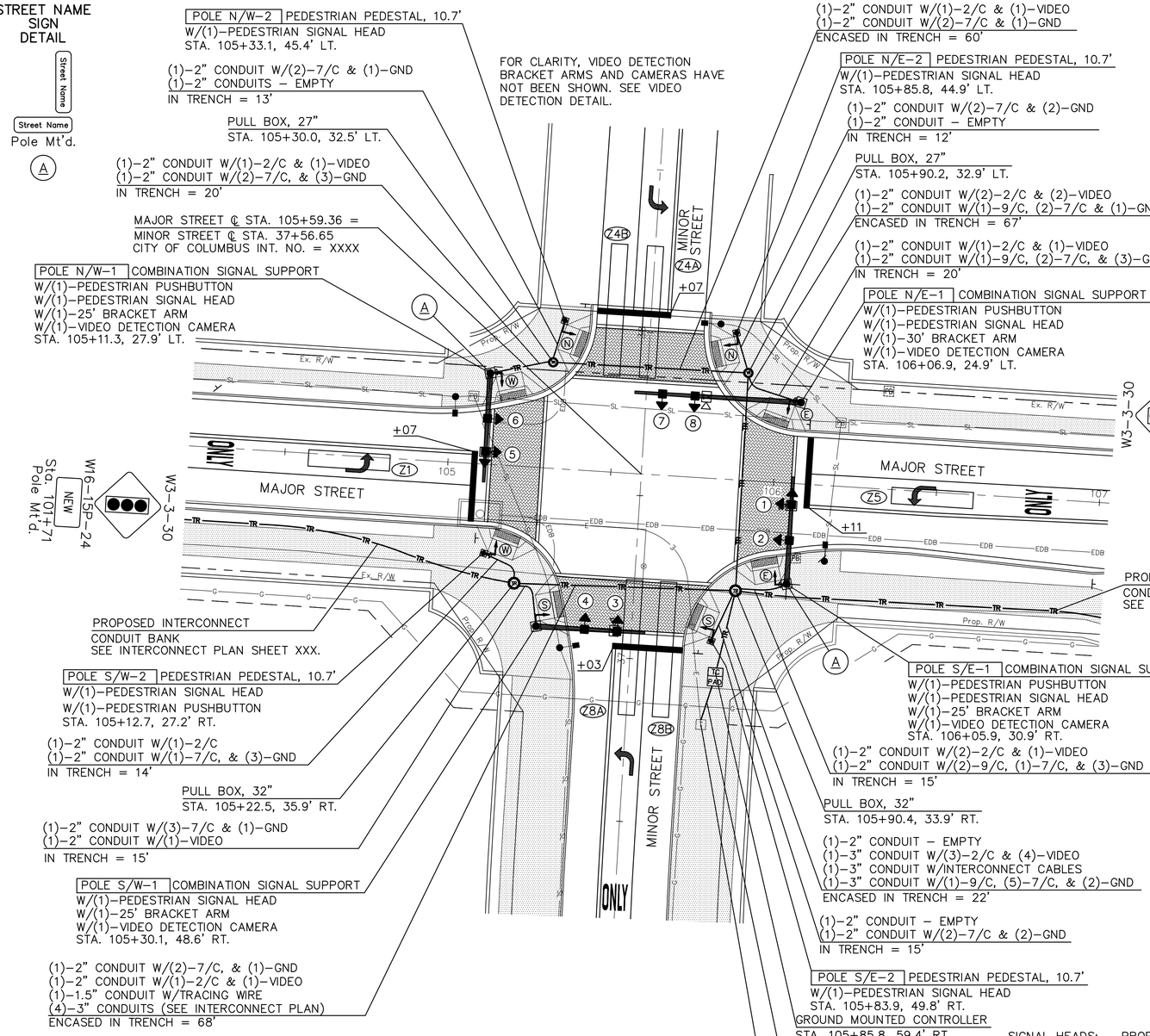
12" HEADS 1 & 5

PEDESTRIAN SIGNAL HEAD CONFIGURATION



STREET NAME SIGN DETAIL





NOTES:

1. The Contractor shall ensure that all sidewalks/pathways meet ADA guidelines per City specifications.
2. Power, service and interconnect cable shall be continuous with no splices except as noted.
3. For signing and pavement markings, see sheet(s) XX & XX.
4. The top of the pole base foundation shall be edged using a 1/2" sidewalk edger instead of being chamfered.
5. The Transportation Division Personnel shall approve bolt alignment, pole foundation location and elevation prior to the Contractor installing the foundation.
6. Tagging of cable in the pullbox next to the control cabinet is not required except for tagging of certain cable as directed by the Project Engineer or as per plan.
7. The pedestrian signal head shall be aimed at the centerline of the crosswalk area (not the curb ramp) that is opposite of the pedestrian signal head. The pedestrian signal heads shall also have a slight downward angle to it.
8. Do not encase the ground rod, the grounding wire or the EMT conduit in concrete outside of their foundation. Full access to these items must be maintained at all times. Permanently mark the top of foundation concrete, if visible, with a marker or symbol so the rod location can be known by others.
9. Any signal support base foundation within or adjacent to a sidewalk area shall be flush with the top of the sidewalk.
10. The Contractor shall not install pole foundations until the pole location area is at finished grade.
11. Undergrou[illegible] posed sidewalk [illegible] to the placeme[illegible] roadway course.
12. The Contr[illegible] en the control [illegible] furnished and inst[illegible] shall be run sepa[illegible] other cable.
13. See interconnect schematic sheet(s) XXX for interconnect items.
14. For continuation of conduit, see sheet(s) XXX and XXX.
15. The control cabinet door shall be located on the south side of the cabinet.
16. The top surface of a cabinet foundation located in sidewalk areas shall be 4" above the surrounding walk. Expansion material shall be used between all foundations and adjacent sidewalk.
17. Use a separate conduit for each grouping of cables unless otherwise indicated: one conduit for 120VAC signal cable (5C, 7C, 9C, GND); one conduit for power; one conduit for 2 conductor cable (loop & pushbutton); and one conduit for interconnect cable (twisted pair, fiber optics or coax). Any other low voltage cable not specified above can be placed in the 2 conductor cable conduit. Power cable must be in its own conduit.
18. Unless otherwise specified the following shall apply. A preformed PVC conduit elbow shall be used to change the PVC conduit direction beyond what its natural bending flex would yield. Rigid metal conduit can be bent to form an elbow or any other bending angle required only if a proper conduit bending machine is used. The elbow radius for any non-interconnect conduit shall be 24" or larger when used in a horizontal or vertical manner. Any type of elbow used for interconnect conduit shall have a radius of 36" or larger when used in a horizontal direction or in a vertical direction when the trench is 36" or deeper. If the trench is less than 36" then the vertical elbow radius shall be 24".
19. All clamps and banding material shall be painted to match the signal supports.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.

SEE CITY OF COLUMBUS, TRAFFIC SIGNAL DESIGN MANUAL, SECTION 2.1 FOR A COMPLETE TRAFFIC SIGNAL PLAN LEGEND.

LEGEND

SIGNAL HEADS:	PROP. VEHICULAR; EX. VEHICULAR
	PROP. PEDESTRIAN; EX. PEDESTRIAN
SIGNAL POLES:	PROP. ANCHOR/STRAIN POLE; EX. ANCHOR/STRAIN POLE
	EX. EMBEDDED POLE; EX. WOOD POLE; GUY ANCHOR
	PROP. PEDESTAL; EX. PEDESTAL; PUSHBUTTON
	EX. MASTARM
	PROP. MASTARM
CONTROLLERS & CABINETS:	EX. CABINET W/PAD; PROP. CABINET W/PAD
	EX. CABINET (NO PAD); PROP. CABINET (NO PAD)
PULL BOXES:	EX. PULL BOX
	PROP. PULL BOX
DETECTION:	FLOW MONITOR; MICROWAVE; RADAR
	VIDEO CAMERA; VIDEO ZONE; Z1
	LOOP DETECTOR; L1A
MISCELLANEOUS:	REDLIGHT CAMERA; REDLIGHT FLASH

N

SCALE: 0 10 20 40 — 1 inch = 20 feet

CALCULATED XXX

CHECKED XXX

TRAFFIC SIGNAL INSTALLATION PLAN
STREET A AT STREET C

PROJECT NAME

XX XX

XXXX E

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FIELD WIRING HOOK-UP CHART

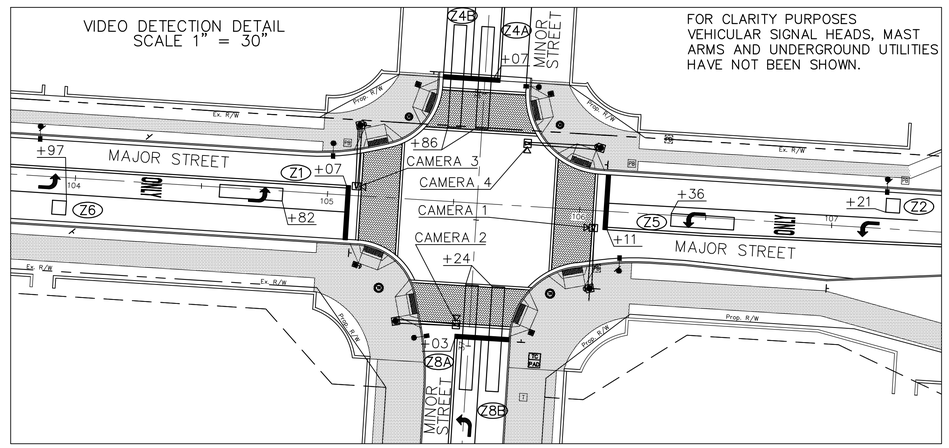
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (EBLT)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
	~~Y~~	ø1 Y	
	~~G~~	ø1 G	
2 (EB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
3 & 4 (SB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
5 (WBLT)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
	~~Y~~	ø5 Y	
	~~G~~	ø5 G	
6 (WB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
7 & 8 (NB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
N	WALK	G ø2-W	OFF
	DON'T WALK	R ø2-DW	
S	WALK	G ø6-W	OFF
	DON'T WALK	R ø6-DW	
E	WALK	G ø8-W	OFF
	DON'T WALK	R ø8-DW	
W	WALK	G ø4-W	OFF
	DON'T WALK	R ø4-DW	

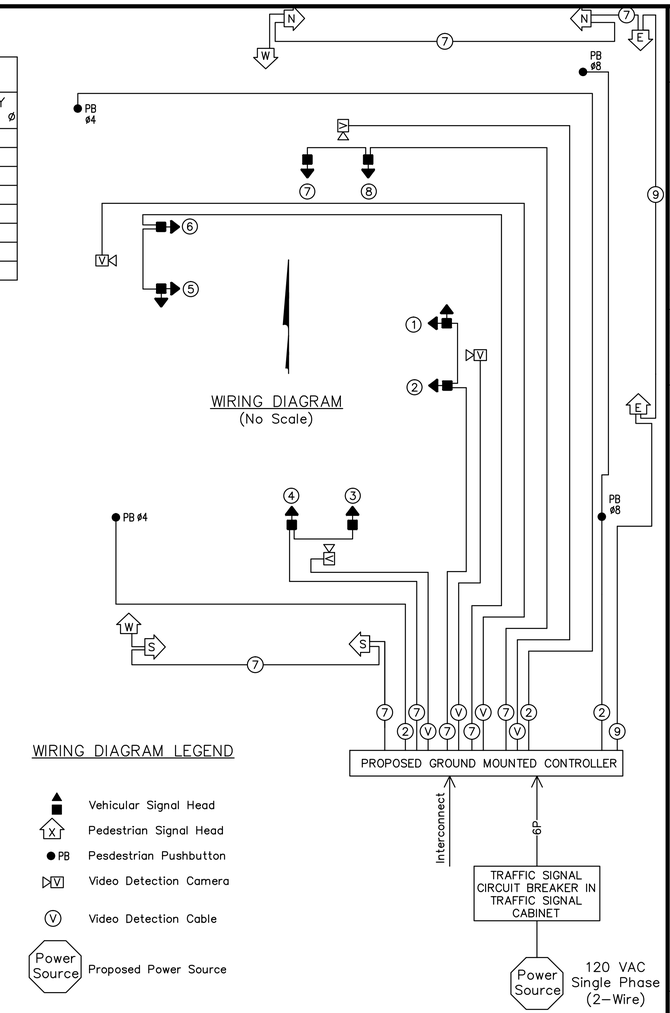
TIMING CHART

PHASE	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MOVEMENT	EBLT	WB	NBLT	SB	WBLT	EB	SBLT	NB
MIN INITIAL	7	20	–	10	7	20	–	10
WALK	–	7	–	7	–	7	–	7
PED CLR	–	10	–	11	–	11	–	11
PASS / EXT	3.7	3.7	–	3.7	3.7	3.7	–	3.7
YELLOW	3.0	3.6	–	3.0	3.0	3.6	–	3.0
RED CLR	2.7	1.7	–	2.8	2.7	1.7	–	2.9
MAX GRN 1	15	40	–	20	15	40	–	20
MAX GRN 2	15	40	–	20	15	40	–	20
PED RECALL	OFF	ON	–	OFF	OFF	ON	–	OFF
VEH RECALL	OFF	ON	–	OFF	OFF	ON	–	OFF
MEMORY	OFF	ON	–	OFF	OFF	ON	–	OFF

VIDEO DETECTION ASSIGNMENTS

DETECTOR	CAMERA	PHASE	SIZE	PULSE	PRESENCE	LOOP DELAY DATA	
						DELAY (SEC.)	INHIBIT DELAY DURING GREEN ø
Z1	1	ø1	5'x25'		X	3	ø1
Z2	3	ø2	5.5'x5.5'	X		–	–
Z4A	2	ø4	5'x40'		X	3	ø4
Z4B	2	ø4	5.5'x40'		X	8	ø4
Z5	3	ø5	5'x25'		X	3	ø5
Z6	1	ø6	5.5'x5.5'	X		–	–
Z8A	4	ø8	5'x40'		X	3	ø8
Z8B	4	ø8	5.5'x40'		X	8	ø8





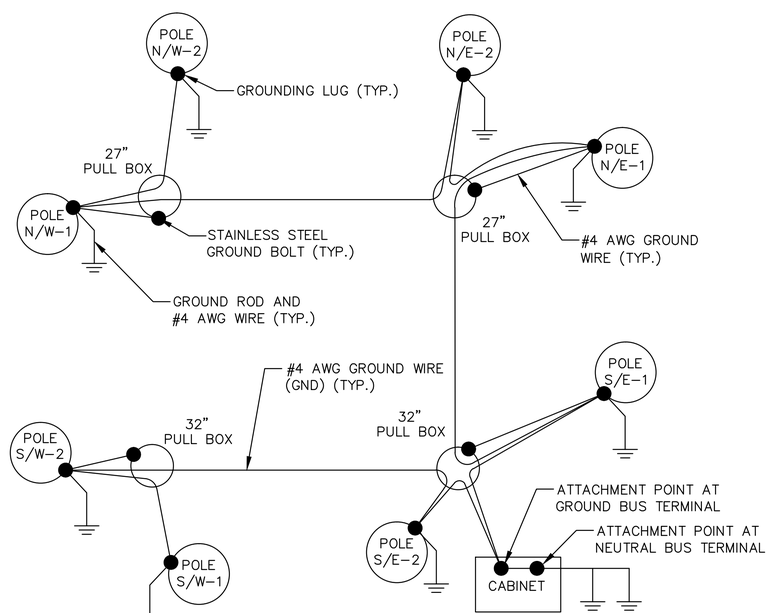
WIRING DIAGRAM LEGEND

- Vehicular Signal Head
- Pedestrian Signal Head
- PB Pesdestrian Pushbutton
- Video Detection Camera
- V Video Detection Cable
- Power Source Proposed Power Source
- 6P 2/C #6 AWG

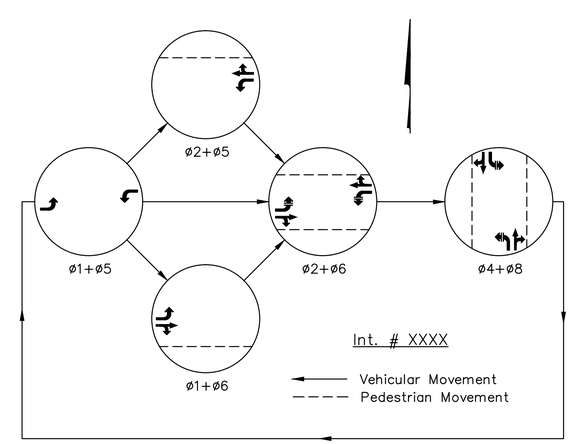
NOTES:

1. SET CONFLICT MONITOR FOR 10 SEC FLASH.
2. LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET.
3. BACK PANEL WIRING (FRONT SIDE JUMPERS ONLY)
   A) HARD WIRE PED RECYCLE AND REST-IN-WALK TO GROUND. HOOK THE [illegible] UTS AS INDICATED. [illegible] 6.
   B) INS [illegible] OUTPUT AND [illegible] OMITTED DURING [illegible]
   C) INS [illegible] OUTPUT AND ø5 [illegible] ITTED DURING THE [illegible]
   D) USE DIODES TO PREVENT FEEDBACK ON MULTI-USE TERMINALS.
4. CONTROLLER SOFTWARE PROGRAMMING
   A) INITIALIZE IN ø2 & ø6 GREEN
   B) ENABLE DUAL ENTRY. ACTIVATE ø4 & ø8.
   C) ENABLE SIMULTANEOUS GAP OUT. ACTIVATE ø2, ø4, ø6 & ø8.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.



GROUNDING DIAGRAM



PHASING DIAGRAM

TRAFFIC SIGNAL DETAILS
STREET A AT STREET C

SCALE None
CALCULATED XXX
CHECKED XXX

PROJECT NAME

XX/XX

XXXX E

REVISED 4/11/14

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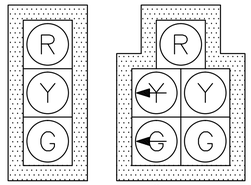
MAST ARM EXAMPLE

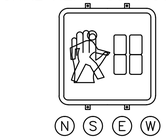
VEHICULAR TRAFFIC SIGNAL HEAD CONFIGURATION

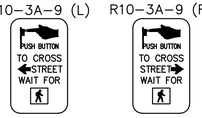


12" HEADS 2, 3, 4, 6, 7 & 8

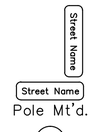
12" HEADS 1 & 5

PEDESTRIAN SIGNAL HEAD CONFIGURATION





STREET NAME SIGN DETAIL



NOTES:

1. The Contractor shall ensure that all sidewalks/pathways meet ADA guidelines per City specifications.
2. Power, service and interconnect cable shall be continuous with no splices except as noted.
3. For signing and pavement markings, see sheet(s) XX & XX.
4. The top of the pole base foundation shall be edged using a 1/2" sidewalk edger instead of being chamfered.
5. The Transportation Division Personnel shall approve bolt alignment, pole foundation location and elevation prior to the Contractor installing the foundation.
6. Tagging of cable in the pullbox next to the control cabinet is not required except for tagging of certain cable as directed by the Project Engineer or as per plan.
7. The pedestrian signal head shall be aimed at the centerline of the crosswalk area (not the curb ramp) that is opposite of the pedestrian signal head. The pedestrian signal heads shall also have a slight downward angle to it.
8. Do not encase the ground rod, the grounding wire or the EMT conduit in concrete outside of their foundation. Full access to these items must be maintained at all times. Permanently mark the top of foundation concrete, if visible, with a marker or symbol so the rod location can be known by others.
9. Any signal support base foundation within or adjacent to a sidewalk area shall be flush with the top of the sidewalk.
10. The Contractor shall not install pole foundations until the pole location area is at finished grade.
11. Undergrou[illegible] posed sidewalk [illegible] to the placeme[illegible] roadway course.
12. The Contr[illegible] en the control [illegible] furnished and inst[illegible] shall be run sepa[illegible] other cable.
13. See interconnect schematic sheet(s) XXX for interconnect items.
14. For continuation of conduit, see sheet(s) XXX and XXX.
15. The control cabinet door shall be located on the south side of the cabinet.
16. The top surface of a cabinet foundation located in sidewalk areas shall be 4" above the surrounding walk. Expansion material shall be used between all foundations and adjacent sidewalk.
17. Use a separate conduit for each grouping of cables unless otherwise indicated: one conduit for 120VAC signal cable (5C, 7C, 9C, GND); one conduit for power; one conduit for 2 conductor cable (loop & pushbutton); and one conduit for interconnect cable (twisted pair, fiber optics or coax). Any other low voltage cable not specified above can be placed in the 2 conductor cable conduit. Power cable must be in its own conduit.
18. Unless otherwise specified the following shall apply. A preformed PVC conduit elbow shall be used to change the PVC conduit direction beyond what its natural bending flex would yield. Rigid metal conduit can be bent to form an elbow or any other bending angle required only if a proper conduit bending machine is used. The elbow radius for any non-interconnect conduit shall be 24" or larger when used in a horizontal or vertical manner. Any type of elbow used for interconnect conduit shall have a radius of 36" or larger when used in a horizontal direction or in a vertical direction when the trench is 36" or deeper. If the trench is less than 36" then the vertical elbow radius shall be 24".
19. All clamps and banding material shall be painted to match the signal supports.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.

POLE N/W-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+33.1, 45.4' LT.

(1)-2" CONDUIT W/(2)-7/C & (1)-GND
(1)-2" CONDUITS - EMPTY
IN TRENCH = 13'

PULL BOX, 27"
STA. 105+30.0, 32.5' LT.

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-7/C, & (3)-GND
IN TRENCH = 20'

MAJOR STREET ℄ STA. 105+59.36 =
MINOR STREET ℄ STA. 37+56.65
CITY OF COLUMBUS INT. NO. = XXXX

POLE N/W-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 105+11.3, 27.9' LT.

FOR CLARITY, VIDEO DETECTION BRACKET ARMS AND CAMERAS HAVE NOT BEEN SHOWN. SEE VIDEO DETECTION DETAIL.

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-7/C & (1)-GND
ENCASED IN TRENCH = 60'

POLE N/E-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+85.8, 44.9' LT.

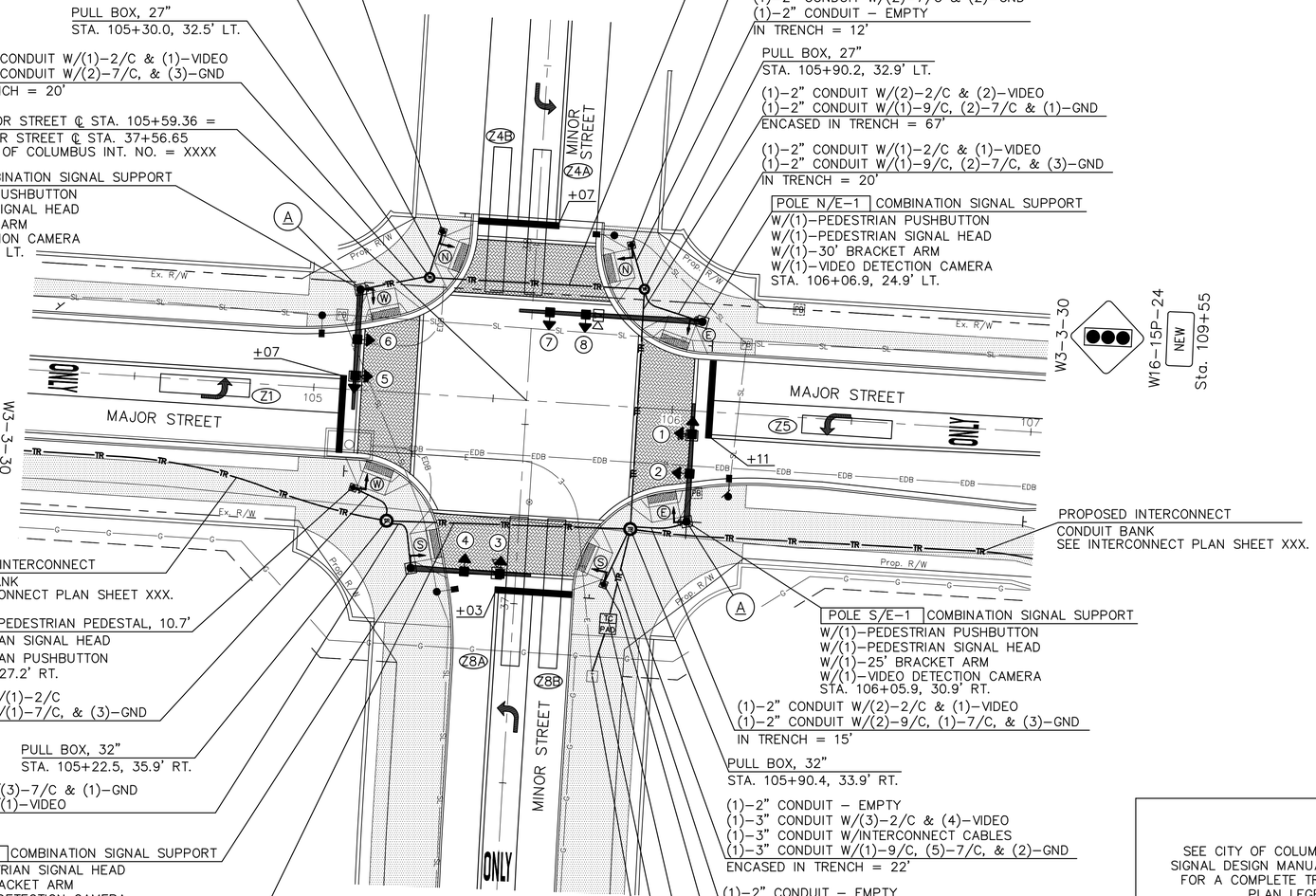
(1)-2" CONDUIT W/(2)-7/C & (2)-GND
(1)-2" CONDUIT - EMPTY
IN TRENCH = 12'

PULL BOX, 27"
STA. 105+90.2, 32.9' LT.

(1)-2" CONDUIT W/(2)-2/C & (2)-VIDEO
(1)-2" CONDUIT W/(1)-9/C, (2)-7/C & (1)-GND
ENCASED IN TRENCH = 67'

(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(1)-9/C, (2)-7/C, & (3)-GND
IN TRENCH = 20'

POLE N/E-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-30' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 106+06.9, 24.9' LT.



PROPOSED INTERCONNECT
CONDUIT BANK
SEE INTERCONNECT PLAN SHEET XXX.

PROPOSED INTERCONNECT
CONDUIT BANK
SEE INTERCONNECT PLAN SHEET XXX.

POLE S/W-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-PEDESTRIAN PUSHBUTTON
STA. 105+12.7, 27.2' RT.

(1)-2" CONDUIT W/(1)-2/C
(1)-2" CONDUIT W/(1)-7/C, & (3)-GND
IN TRENCH = 14'

PULL BOX, 32"
STA. 105+22.5, 35.9' RT.

(1)-2" CONDUIT W/(3)-7/C & (1)-GND
(1)-2" CONDUIT W/(1)-VIDEO
IN TRENCH = 15'

POLE S/W-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 105+30.1, 48.6' RT.

(1)-2" CONDUIT W/(2)-7/C, & (1)-GND
(1)-2" CONDUIT W/(1)-2/C & (1)-VIDEO
(1)-1.5" CONDUIT W/TRACING WIRE
(4)-3" CONDUITS (SEE INTERCONNECT PLAN)
ENCASED IN TRENCH = 68'

POLE S/E-1 COMBINATION SIGNAL SUPPORT
W/(1)-PEDESTRIAN PUSHBUTTON
W/(1)-PEDESTRIAN SIGNAL HEAD
W/(1)-25' BRACKET ARM
W/(1)-VIDEO DETECTION CAMERA
STA. 106+05.9, 30.9' RT.

(1)-2" CONDUIT W/(2)-2/C & (1)-VIDEO
(1)-2" CONDUIT W/(2)-9/C, (1)-7/C, & (3)-GND
IN TRENCH = 15'

PULL BOX, 32"
STA. 105+90.4, 33.9' RT.

(1)-2" CONDUIT - EMPTY
(1)-3" CONDUIT W/(3)-2/C & (4)-VIDEO
(1)-3" CONDUIT W/INTERCONNECT CABLES
(1)-3" CONDUIT W/(1)-9/C, (5)-7/C, & (2)-GND
ENCASED IN TRENCH = 22'

(1)-2" CONDUIT - EMPTY
(1)-2" CONDUIT W/(2)-7/C & (2)-GND
IN TRENCH = 15'

POLE S/E-2 PEDESTRIAN PEDESTAL, 10.7'
W/(1)-PEDESTRIAN SIGNAL HEAD
STA. 105+85.8, 59.4' RT.

GROUND MOUNTED CONTROLLER
STA. 105+85.8, 49.8' RT.

(1)-2" CONDUIT W/(1)-POWER
ENCASED IN TRENCH = 14'

EX. POWER COMPANY PAD
MOUNTED TRANSFORMER
(PROP. POWER SOURCE)

SEE CITY OF COLUMBUS, TRAFFIC SIGNAL DESIGN MANUAL, SECTION 2.1 FOR A COMPLETE TRAFFIC SIGNAL PLAN LEGEND.

LEGEND

SIGNAL HEADS:	PROP. VEHICULAR	EX. VEHICULAR
	PROP. PEDESTRIAN	EX. PEDESTRIAN
SIGNAL POLES:	PROP. ANCHOR/STRAIN POLE	EX. ANCHOR/STRAIN POLE
	EX. EMBEDDED POLE	EX. WOOD POLE / GUY ANCHOR
	PROP. PEDESTAL	EX. PEDESTAL / PUSHBUTTON
	EX. MASTARM	
	PROP. MASTARM	
CONTROLLERS & CABINETS:	EX. CABINET W/PAD	PROP. CABINET W/PAD
	EX. CABINET (NO PAD)	PROP. CABINET (NO PAD)
PULL BOXES:	EX. PULL BOX	
	PROP. PULL BOX	
DETECTION:	FLOW MONITOR	MICROWAVE / RADAR
	VIDEO CAMERA / VIDEO ZONE (Z1)	
	LOOP DETECTOR (L1A)	
MISCELLANEOUS:	REDLIGHT CAMERA	REDLIGHT FLASH

N

SCALE: 0 10 20 40 — 1 inch = 20 feet

CALCULATED XXX
CHECKED XXX

TRAFFIC SIGNAL INSTALLATION PLAN
STREET A AT STREET C

PROJECT NAME

XX XX

XXXX E

REVISED 4/11/14

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FIELD WIRING HOOK-UP CHART

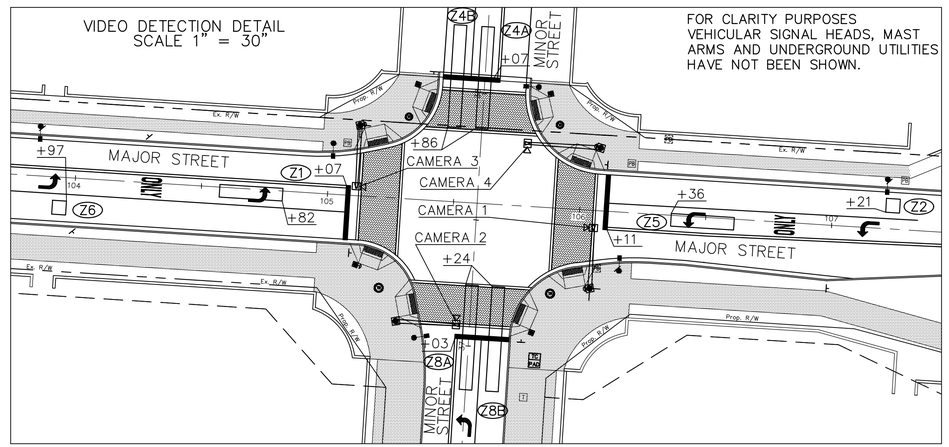
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1 (EBLT)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
	◄Y	ø1 Y	
	◄G	ø1 G	
2 (EB)	R	ø6 R	Y
	Y	ø6 Y	
	G	ø6 G	
3 & 4 (SB)	R	ø4 R	R
	Y	ø4 Y	
	G	ø4 G	
5 (WBLT)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
	◄Y	ø5 Y	
	◄G	ø5 G	
6 (WB)	R	ø2 R	Y
	Y	ø2 Y	
	G	ø2 G	
7 & 8 (NB)	R	ø8 R	R
	Y	ø8 Y	
	G	ø8 G	
N	WALK	G ø2-W	OFF
	DON'T WALK	R ø2-DW	
S	WALK	G ø6-W	OFF
	DON'T WALK	R ø6-DW	
E	WALK	G ø8-W	OFF
	DON'T WALK	R ø8-DW	
W	WALK	G ø4-W	OFF
	DON'T WALK	R ø4-DW	

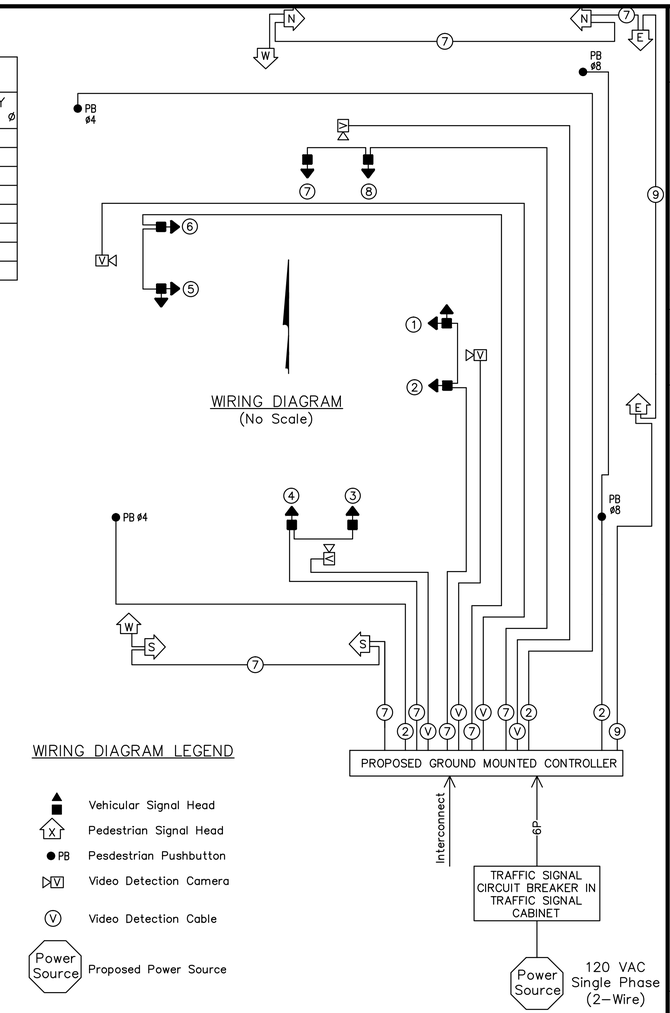
TIMING CHART

PHASE	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8
MOVEMENT	EBLT	WB	NBLT	SB	WBLT	EB	SBLT	NB
MIN INITIAL	7	20	–	10	7	20	–	10
WALK	–	7	–	7	–	7	–	7
PED CLR	–	10	–	11	–	11	–	11
PASS / EXT	3.7	3.7	–	3.7	3.7	3.7	–	3.7
YELLOW	3.0	3.6	–	3.0	3.0	3.6	–	3.0
RED CLR	2.7	1.7	–	2.8	2.7	1.7	–	2.9
MAX GRN 1	15	40	–	20	15	40	–	20
MAX GRN 2	15	40	–	20	15	40	–	20
PED RECALL	OFF	ON	–	OFF	OFF	ON	–	OFF
VEH RECALL	OFF	ON	–	OFF	OFF	ON	–	OFF
MEMORY	OFF	ON	–	OFF	OFF	ON	–	OFF

VIDEO DETECTION ASSIGNMENTS

DETECTOR	CAMERA	PHASE	SIZE	PULSE	PRESENCE	LOOP DELAY DATA	
						DELAY (SEC.)	INHIBIT DELAY DURING GREEN ø
Z1	1	ø1	5'x25'		X	3	ø1
Z2	3	ø2	5.5'x5.5'	X		–	–
Z4A	2	ø4	5'x40'		X	3	ø4
Z4B	2	ø4	5.5'x40'		X	8	ø4
Z5	3	ø5	5'x25'		X	3	ø5
Z6	1	ø6	5.5'x5.5'	X		–	–
Z8A	4	ø8	5'x40'		X	3	ø8
Z8B	4	ø8	5.5'x40'		X	8	ø8





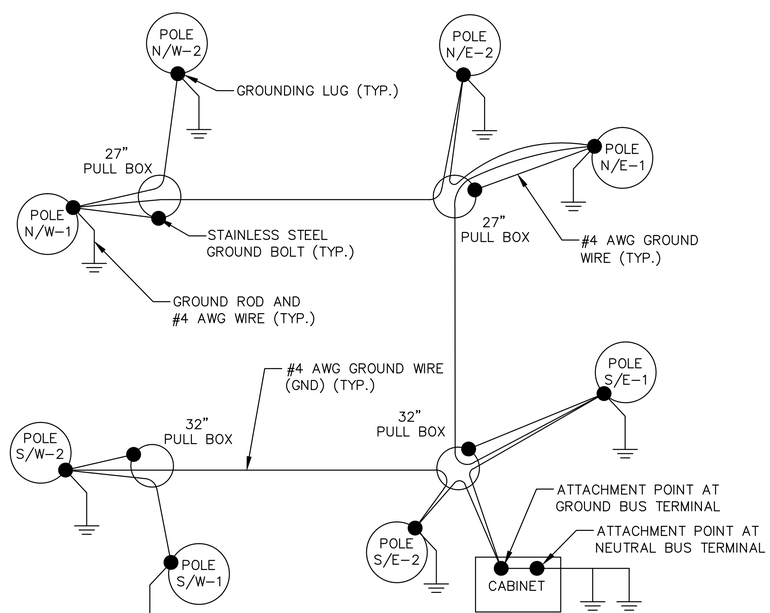
WIRING DIAGRAM LEGEND

- Vehicular Signal Head
- Pedestrian Signal Head
- PB Pesdestrian Pushbutton
- Video Detection Camera
- V Video Detection Cable
- Power Source Proposed Power Source
- 6P 2/C #6 AWG

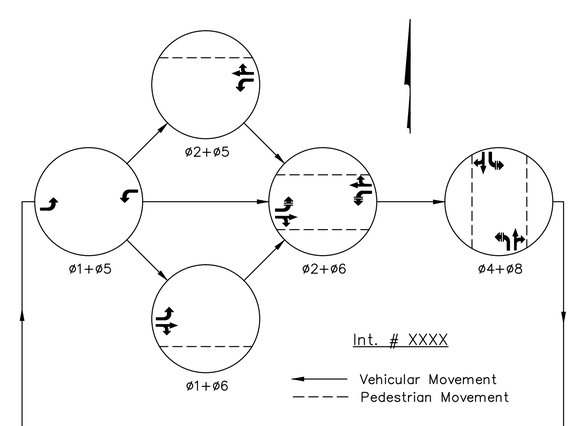
NOTES:

1. SET CONFLICT MONITOR FOR 10 SEC FLASH.
2. LOOP DETECTOR LEAD-IN CABLE SHALL BE USED FOR THE PEDESTRIAN PUSHBUTTONS. GROUND THE SHIELD ONLY AT THE CABINET.
3. BACK PANEL WIRING (FRONT SIDE JUMPERS ONLY)
   A) HARD WIRE PED RECYCLE AND REST-IN-WALK TO GROUND. HOOK THE [illegible] UTS AS INDICATED. [illegible] 6.
   B) INS [illegible] OUTPUT AND [illegible] OMITTED DURING [illegible]
   C) INS [illegible] OUTPUT AND ø5 [illegible] ITTED DURING THE [illegible]
   D) USE DIODES TO PREVENT FEEDBACK ON MULTI-USE TERMINALS.
4. CONTROLLER SOFTWARE PROGRAMMING
   A) INITIALIZE IN ø2 & ø6 GREEN
   B) ENABLE DUAL ENTRY. ACTIVATE ø4 & ø8.
   C) ENABLE SIMULTANEOUS GAP OUT. ACTIVATE ø2, ø4, ø6 & ø8.

PLAN SHEET NOTES ARE ISSUED BY THE CITY OF COLUMBUS. ONLY USE NOTES APPLICABLE TO THE PROJECT.



GROUNDING DIAGRAM



PHASING DIAGRAM

TRAFFIC SIGNAL DETAILS
STREET A AT STREET C

PROJECT NAME

SCALE None

CALCULATED XXX
CHECKED XXX

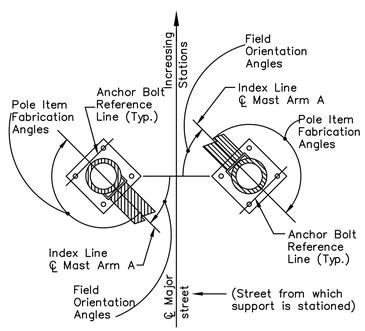
XX/XX

XXXX E

REVISED 4/11/14

J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\14_11 MAST ARM SAMPLE PLAN.dwg Last Saved By: motahari, 11/10/2014 3:41 PM Last Printed By: Tahari, Moe, 11/12/2014 7:55 AM (No Xrefs)

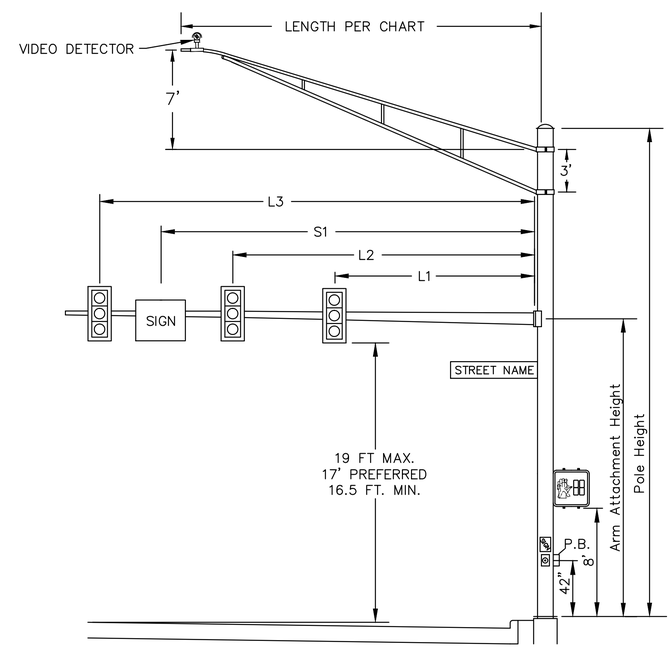
INTERSECTION	SHEET NO.	SUPPORT DESIGNATION	POLE COLOR	POLE DESIGN NO.	POLE HT. (FT.)	ARM LENGTH		OBJECT ATTACHMENT HEIGHT			DISTANCE FROM BUTT PLATE (FT.)				POLE FABRICATION DATA–CLOCKWISE FROM MAST ARM A AT 0 DEGREES						FIELD ORIENTATION		
						MASTARM (FT.)	VIDEO BRACKET ARM	MASTARM (FT.)	VIDEO BRACKET ARM	VIDEO DETECTOR MOUNTING HEIGHT	L1	L2	S1	VIDEO DETECTION CAMERA	ANCHOR BOLT REFERENCE LINE	PED. SIGNALS	PED. PUSH BUTTON	VIDEO BRACKET ARM	STREET NAME SIGNS	HANDHOLE	INDEX LINE ANGLE MAST ARM A	ANCHOR BOLT REF. LINE	FOUNDATION ELEVATION*
		S/E–1	Black	4	27'	32'	25'	21.5'	26'	33'	12.5'	23.5'	–	24'	90°	264°	255°	0°	0°/270°	180°	0°	90°	723.87
STREET A	##																						
AT		S/E–2	Black	Pedestal	10.7'	–	–	–	–	–	–	–	–	–	90°	344°	–	–	–	180°	18°	108°	723.61
STREET C																							
		S/W–1	Black	4	27'	32.5'	25'	21.5'	26'	33'	14'	24'	–	24'	90°	264°	–	0°	–	180°	90°	0°	723.62
		S/W–2	Black	Pedestal	10.7'	–	–	–	–	–	–	–	–	–	90°	347°	0°	–	–	180°	106°	16°	724.24
		N/W–1	Black	4	27'	32.5'	25'	21.5'	26'	33'	13'	24'	–	24'	90°	264°	257°	0°	0°/270°	180°	0°	90°	724.55
		N/W–2	Black	Pedestal	10.7'	–	–	–	–	–	–	–	–	–	90°	355°	–	–	–	180°	15°	105°	724.73
		N/E–1	Black	14	27'	50.5'	30'	21.5'	26'	33'	32'	42'	–	29'	90°	8°	5°	0°	–	180°	90°	0°	723.88
		N/E–2	Black	Pedestal	10.7'	–	–	–	–	–	–	–	–	–	90°	285°	–	–	–	180°	75°	165°	724.37



All angles measured clockwise.

Base plate is oriented square to Mast Arm A. Mast Arm A is the largest arm if the support has two mast arms.

TYPICAL SIGNAL SUPPORT ORIENTATION DETAIL



TYPICAL SIGNAL ELEVATION DETAIL

REVISED 4/11/14

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SCALE None

CALCULATED XXX

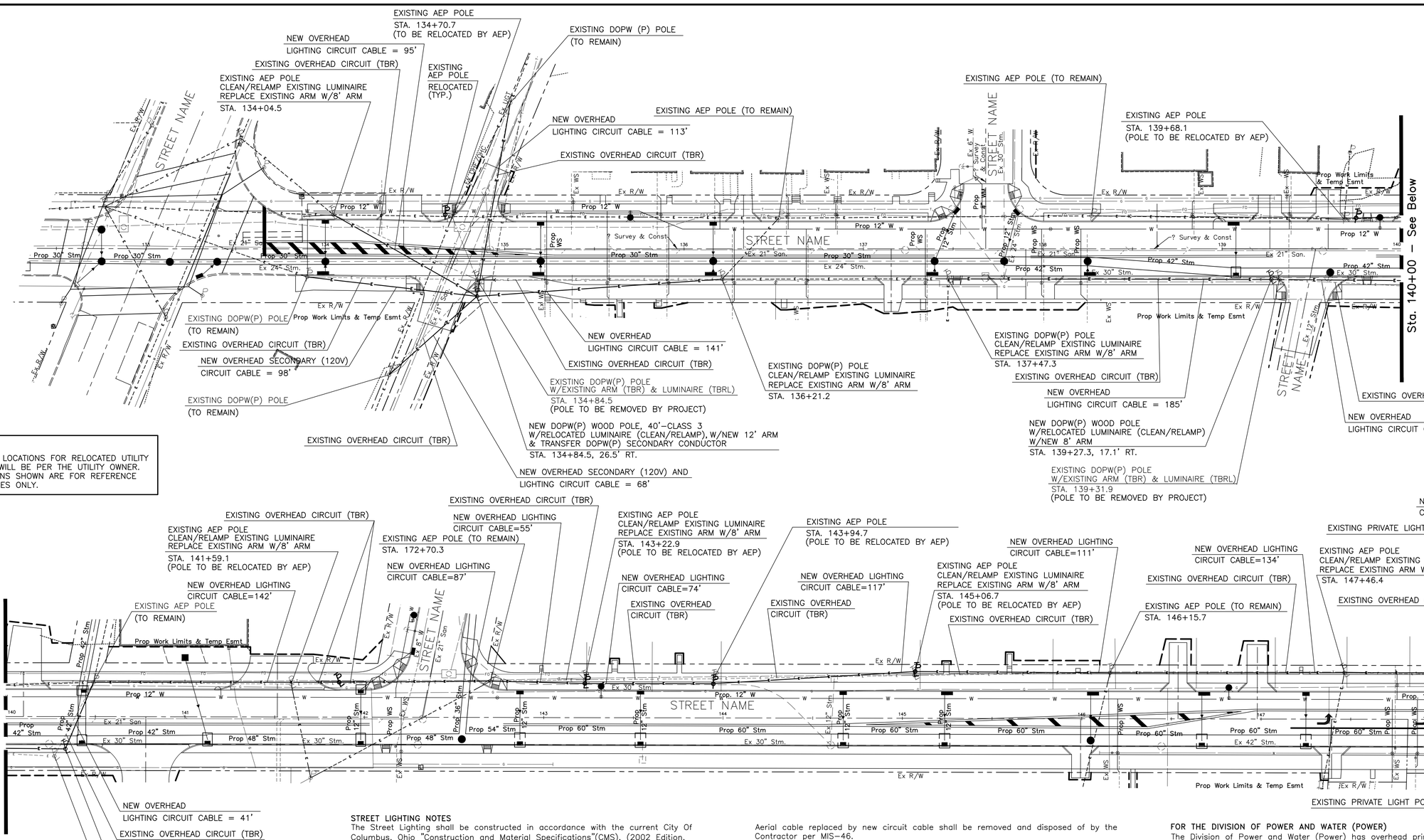
CHECKED XXX

POLE FABRICATION AND ORIENTATION DETAILS

PROJECT NAME

XX XX

XXXX E



NOTE:
ACTUAL LOCATIONS FOR RELOCATED UTILITY POLES WILL BE PER THE UTILITY OWNER. LOCATIONS SHOWN ARE FOR REFERENCE PURPOSES ONLY.

LEGEND

- Existing Overhead Circuit
- Proposed Overhead Circuit
- Other Overhead Electric or Communication
- Pole W/Telephone, Power and Lighting
- AEP – American Electric Power
- DOPW(P) – Division Of Power And Water (Power)
- TBR – To Be Removed
- TBRL – To Be Relocated

STREET LIGHTING NOTES

The Street Lighting shall be constructed in accordance with the current City Of Columbus, Ohio "Construction and Material Specifications"(CMS), (2002 Edition, Section 1000, titled "Street Lighting"), including all supplements thereto, in force on the date of the contract. CMS shall govern all materials and workmanship involved in the improvements shown on these plans, except as such specifications are modified by the following or by the specifications details set forth herein.

The plan details shall be considered supplemental to MIS Specifications.

The Contractor is responsible to comply with all Local codes and ordinances pertinent to the progression on the work described within the Project Plans. Any required permits shall be obtained and paid for by the Contractor. The Contractor and Sub–Contractor shall be responsible for complying with all Federal, State and Local safety requirements, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also the sole responsibility of the Contractor and Sub–Contractor to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work.

Luminaires shall be relocated as shown in the drawings. All relocated luminaires shall be wired in accordance with MIS–10 and shall be cleaned and re–lamped in accordance with MIS–68. Bracket Arms (MIS–6 and MIS–10), overhead circuit cable (MIS–143), overhead circuit ground (MIS–26), down guy anchors (MIS–1) and wooden poles (MIS–42) as required shall be furnished at poles owned by the Division of Power and Water (Power).

Prior to the relocation process, the Contractor and the Engineer shall inspect the luminaires for the purpose of documenting any existing damage. Any dents or other damage identified after the luminaire has been relocated and not documented prior to the relocation operation will be presumed to have been caused by the Contractor. The Contractor shall be required to repair or replace the damaged luminaire at the option of the Design Engineer at the Contractor's expense.

Aerial cable replaced by new circuit cable shall be removed and disposed of by the Contractor per MIS–46.

DOPW(P) wood poles and hardware called out for removal herein, shall be removed and disposed of as per MIS–46.

As–Built Record – The Contractor shall maintain a set of project record documents. These documents shall include reviewed shop drawings, change orders, equipment operating instructions, field test records, and as–built drawings. The as–built drawings shall be marked legibly in red with the actual location of equipment as constructed.

All equipment installed shall have locations marked in distances off a landmark at least every 25 feet or location at a later date. Final documents and plans shall be handed over to the City of Columbus Division of Power and Water. The Division of Power and Water (Power) has overhead primary, secondary and overhead street lighting throughout the project area. The Contractor is hereby required to contact OUPS 1–800–362–2764 forty–eight hours prior to conducting any activity within the construction area. The DOPW (Power) dispatch office number is: (614) 645–7627 (voice).

All items of work called for on the plans, for which no specific method of payment is provided, shall be performed by the Contractor and the cost of these shall be included in the unit price bid for the various related items. This includes, but is not limited to, such incidental items as relocation of mail boxes, saw cutting, and removal and/or relocation of signs, railroad ties, sprinklers, relocating roof or sump drains around light pole foundations, hand digging around underground utilities or other miscellaneous items.

FOR THE DIVISION OF POWER AND WATER (POWER)

The Division of Power and Water (Power) has overhead primary, secondary and overhead street lighting throughout the project area bounded by Hudson St., Cleveland Ave., Joyce Ave., and Woodland Ave. The Contractor is hereby REQUIRED to contact OUPS 1–800–362–2764 forty–eight hours prior to conducting any activity within the construction area. The DOPW (Power) dispatch office number is: (614) 645–7627 (voice).

Any required relocation, support, protection, or any other activity concerned with the City's electrical facilities in the construction area is to be performed by the Contractor under the direction of Division of Power and Water (Power) (DOPW) personnel and at the expense of the project. DOPW shall make all final connections to DOPW's existing electrical system at the expense of the project. The Contractor shall use material and make repairs to the City of Columbus street lighting system by following the Division of Power and Water (Power)'s "Material and Installation Specifications" (MIS) and the City of Columbus "Construction and Material Specifications" (CMS). Any new or re–installed street light system shall require testing as referred to in section 1000.18 of the CMS manual. The Contractor shall conform to the Division of Power and Water (Power)'s existing Conductor Safety policy and Hold Card System (MIS–95), copies of which are available from the Division of Power and Water (Power).

If any electric facility belonging to the Division of Power and Water (Power) is damaged in any manner by the Contractor, its agents, servants, or employees, and requires emergency repairs, the Division of Power and Water (Power) shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the Contractor to the Division of Power and Water (Power), City of Columbus, Ohio.

HORIZ. SCALE 30 0 15 30

CALCULATED | CHECKED

LIGHTING PLAN

PROJECT NAME

XXXX–E

X/XX

REVISED 12/2/11

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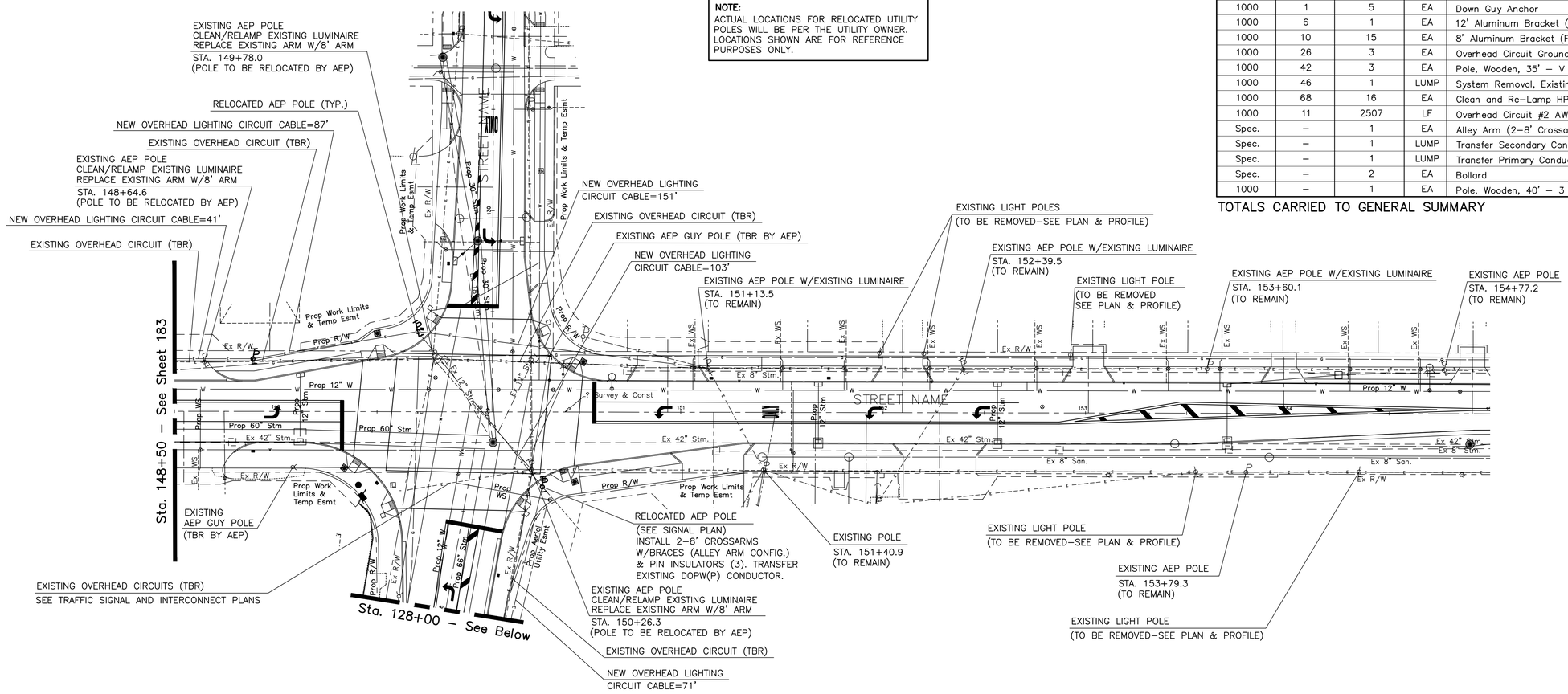
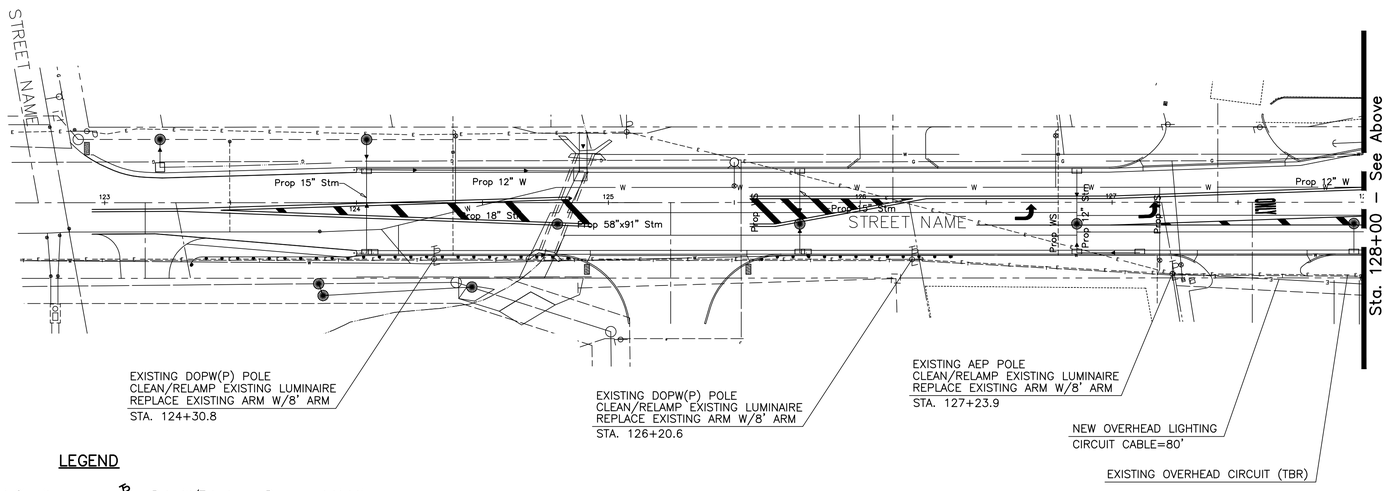
SUB–SUMMARY OF LIGHTING ITEMS

ITEM NUMBER	MIS NUMBER	QUANTITY TOTAL	UNIT	ITEM DESCRIPTION	REF
1000	1	5	EA	Down Guy Anchor	
1000	6	1	EA	12' Aluminum Bracket (For Wood Pole)	
1000	10	15	EA	8' Aluminum Bracket (For Wood Pole)	
1000	26	3	EA	Overhead Circuit Ground Unit	
1000	42	3	EA	Pole, Wooden, 35' – V	
1000	46	1	LUMP	System Removal, Existing Overhead	
1000	68	16	EA	Clean and Re–Lamp HPS Luminaires	
1000	11	2507	LF	Overhead Circuit #2 AWG Aluminum (2 wire)	
Spec.	–	1	EA	Alley Arm (2–8' Crossarms)	
Spec.	–	1	LUMP	Transfer Secondary Conductor	
Spec.	–	1	LUMP	Transfer Primary Conductor, Install Alley Arm	
Spec.	–	2	EA	Bollard	
1000	–	1	EA	Pole, Wooden, 40' – 3	

TOTALS CARRIED TO GENERAL SUMMARY

NOTE:
ACTUAL LOCATIONS FOR RELOCATED UTILITY POLES WILL BE PER THE UTILITY OWNER. LOCATIONS SHOWN ARE FOR REFERENCE PURPOSES ONLY.





LEGEND

- Existing Overhead Circuit
- Proposed Overhead Circuit
- Other Overhead Electric or Communication
- Pole W/Telephone, Power and Lighting

AEP – American Electric Power
DOPW(P) – Division Of Power And Water (Power)
TBR – To Be Removed
TBRL – To Be Relocated

SCALE 30 0 15 30

CALCULATED

CHECKED

LIGHTING PLAN

PROJECT NAME

XXXX–E

X/XX

REVISED 12/2/11

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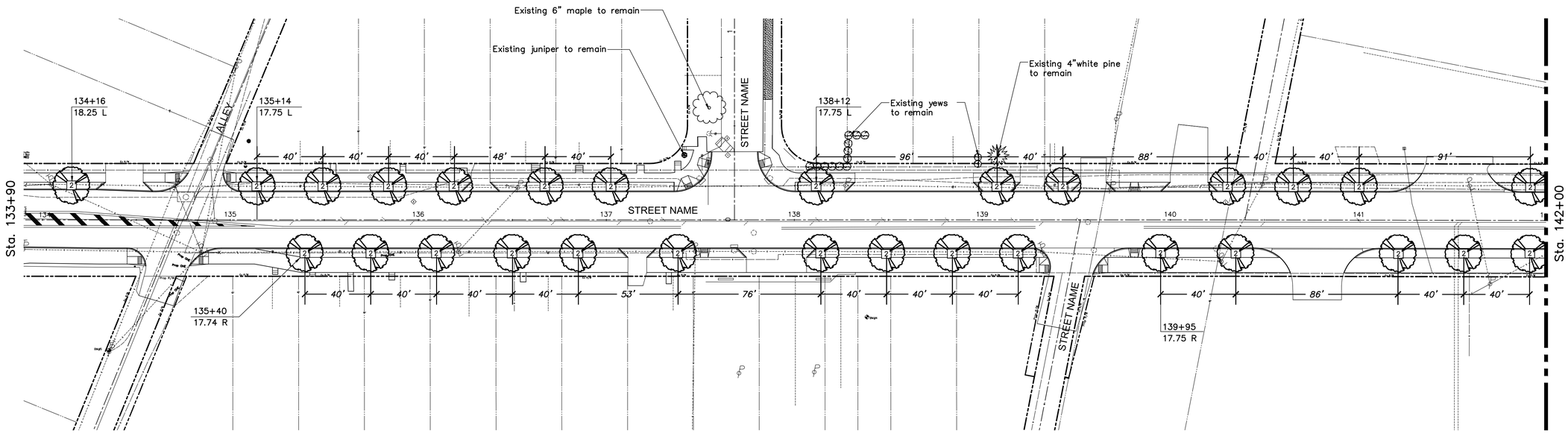

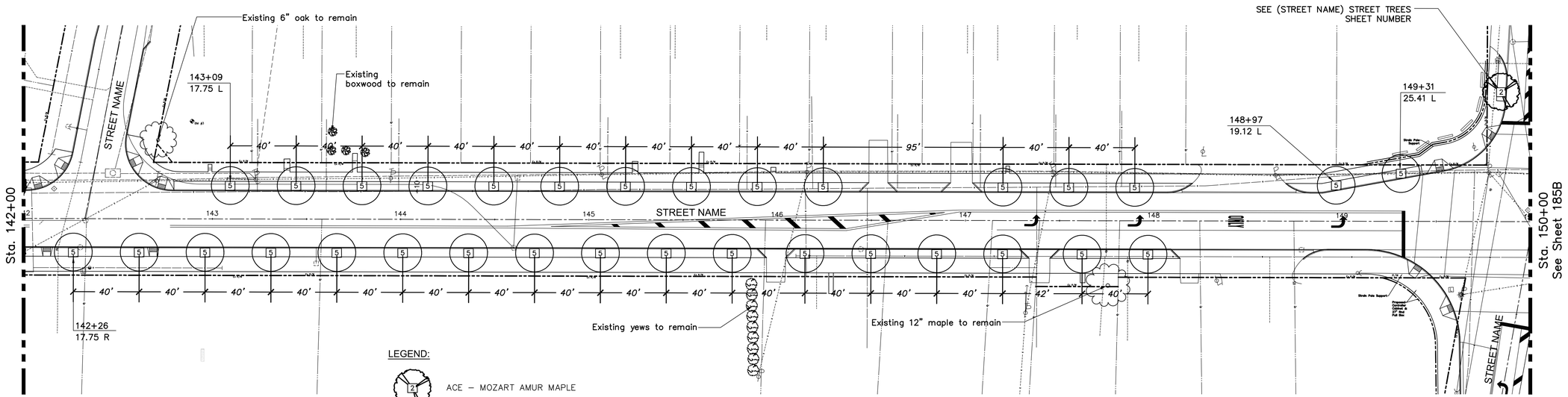

LEGEND:

- ACE – MOZART AMUR MAPLE
- MAA – STARBURST AMUR MAACKIA
- SYR – IVORY SILK TREE LILAC
- EXISTING DECIDUOUS TREE TO REMAIN
- EXISTING EVERGREEN TREE TO REMAIN
- EXISTING SHRUBS TO REMAIN

HORIZ. SCALE 30 0 15 30

CALCULATED

CHECKED

LANDSCAPE PLAN
STA. 133+90 TO STA. 150+00

PROJECT NAME

XXXX–E

X/XX

REVISED 6/27/14

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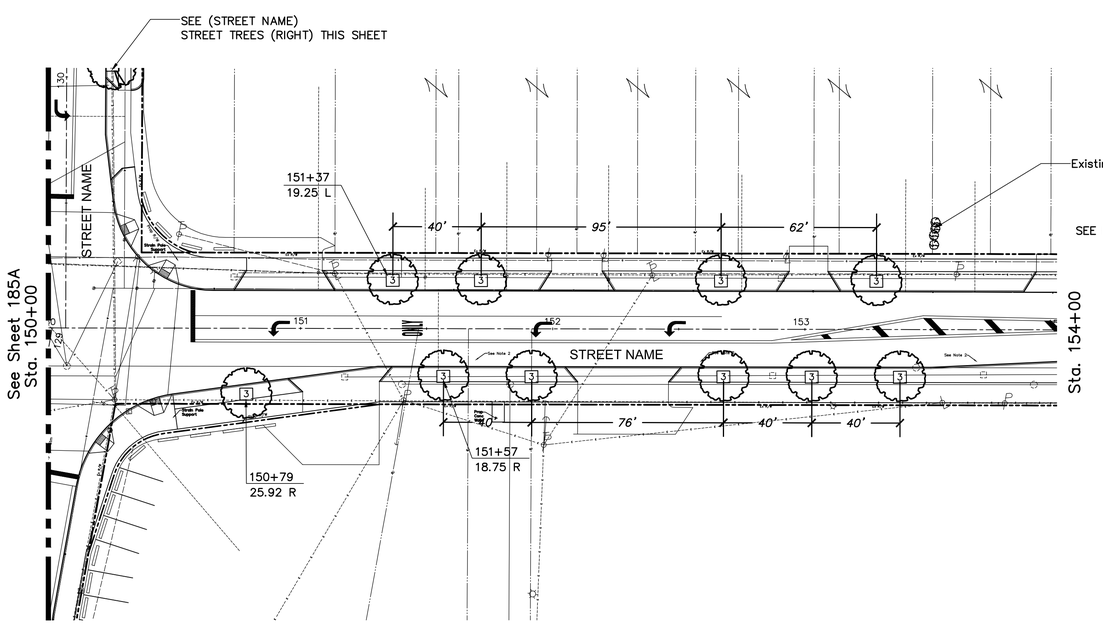
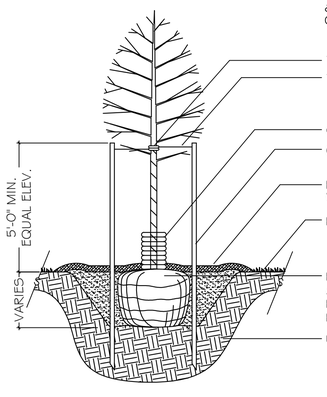


STREET NAME

SCALE: 1" = 30'

ITEM NO.	ESTIMATE QUANTITIES	KEY	UNIT	DESCRIPTION		
				PLANTING	SIZE	COMMENTS
661	44	ACE	EACH	ACER ginnala 'MOZART' MOZART AMUR MAPLE	2" CAL.	B&B
661	32	MAA	EACH	MAACKIA amurensis 'STARBURST' STARBURST AMUR MAACKIA	2" CAL.	B&B
661	10	SYR	EACH	SYRINGA retic ulata 'IVORY SILK' IVORY SILK TREE LILAC	2" CAL.	B&B, TREE FORM
				MISC.		
662	2150		GAL.	LANDSCAPE WATERING (25 GAL./TREE)		



NOTE:
REMOVE DEAD & BROKEN BRANCHES
& ALL SUCKER GROWTH. DO NOT DAMAGE
OR REMOVE CENTRAL LEADER.

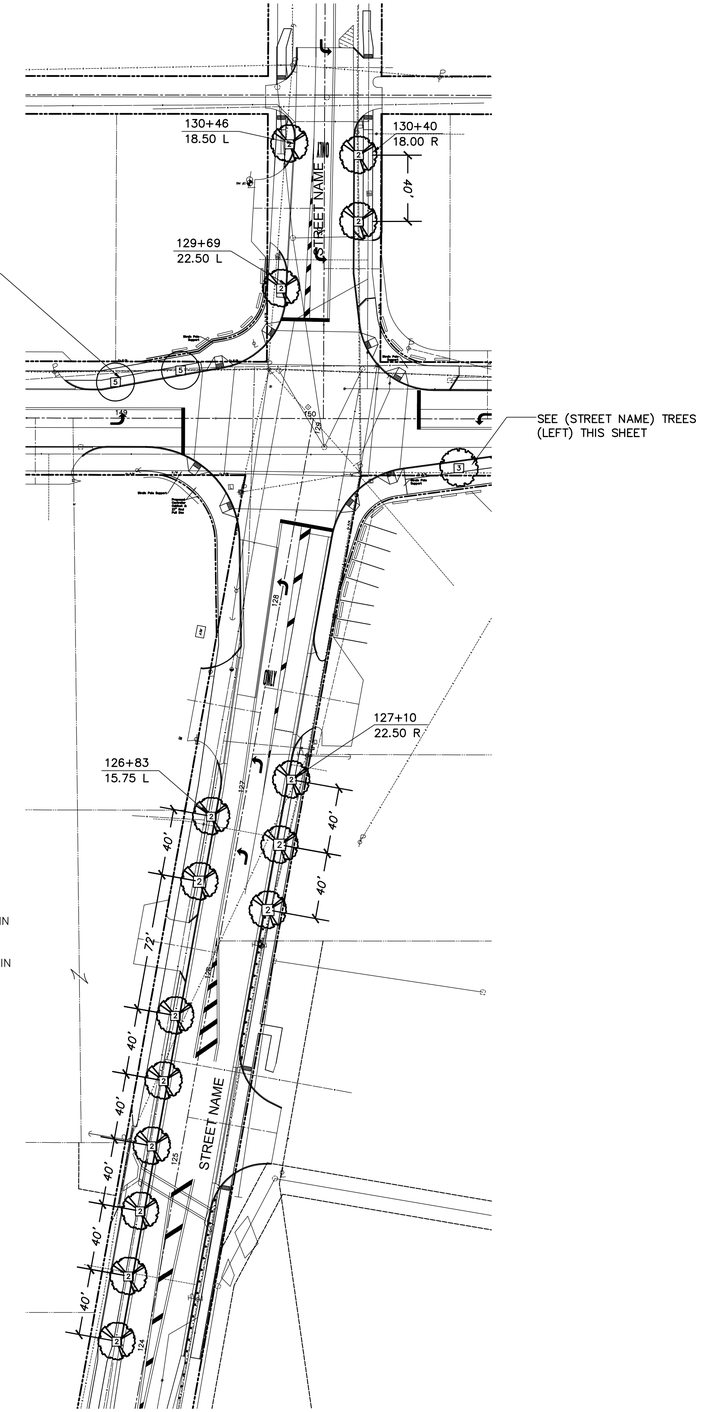
TREE TIE WEBBING
TREE TIE WEBBING
CORRUGATED TREE GUARD TUBING MINIMUM 12" HEIGHT
(2) 6' METAL STAKES REQUIRED
PNON-COLORED WOOD MULCH 2" DEPTH
WITH 3" SAUCER EDGE.
FINISHED GRADE OF LAWN
PLANT ROOT FLARE 1"
ABOVE EXISTING FIN. GRADE
REMOVE TOP 1/3 OF BURLAP FROM
ROOTBALL INCL. ANY ROPE OR METAL
UNDISTURBED SUBGRADE

STREET TREE PLANTING

N.T.S.

LEGEND:

- ACE – MOZART AMUR MAPLE
- MAA – STARBURST AMUR MAACKIA
- SYR – IVORY SILK TREE LILAC
- EXISTING DECIDUOUS TREE TO REMAIN
- EXISTING EVERGREEN TREE TO REMAIN
- EXISTING SHRUBS TO REMAIN



STREET NAME

SCALE: 1" = 40'

HORIZ. SCALE

30 0 15 30

CALCULATED

CHECKED

LANDSCAPE PLAN STA. 150+00 TO STA. 154+00
LANDSCAPE PLAN STA. 124+00 TO STA. 130+50

PROJECT NAME

XXXX–E

X
XX

REVISION 6/27/14

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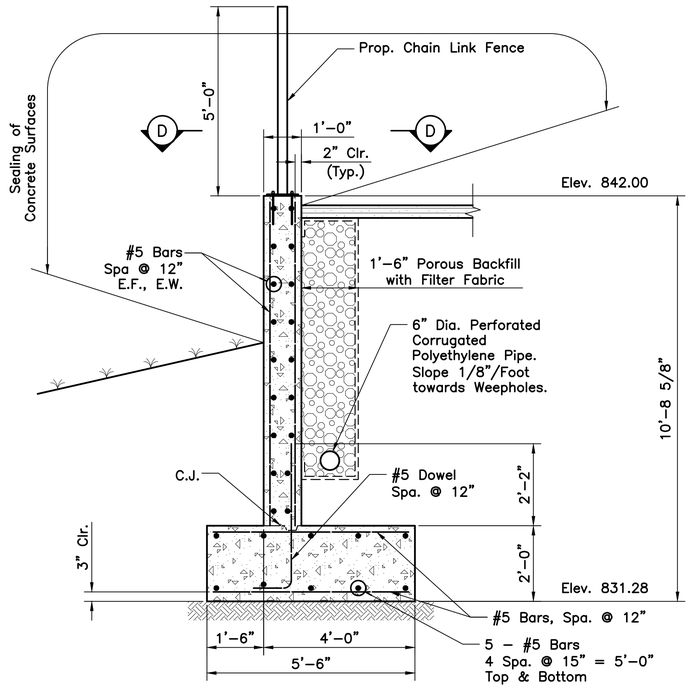
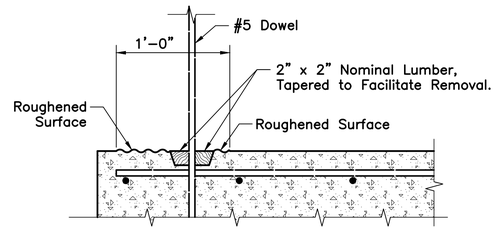


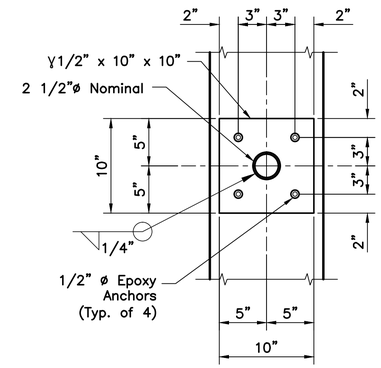
SECTION A–A

(1/2" = 1'-0")



SUGGESTED DETAIL TO FORM 1 1/2" DEEP KEY FOR CONCRETE WALL

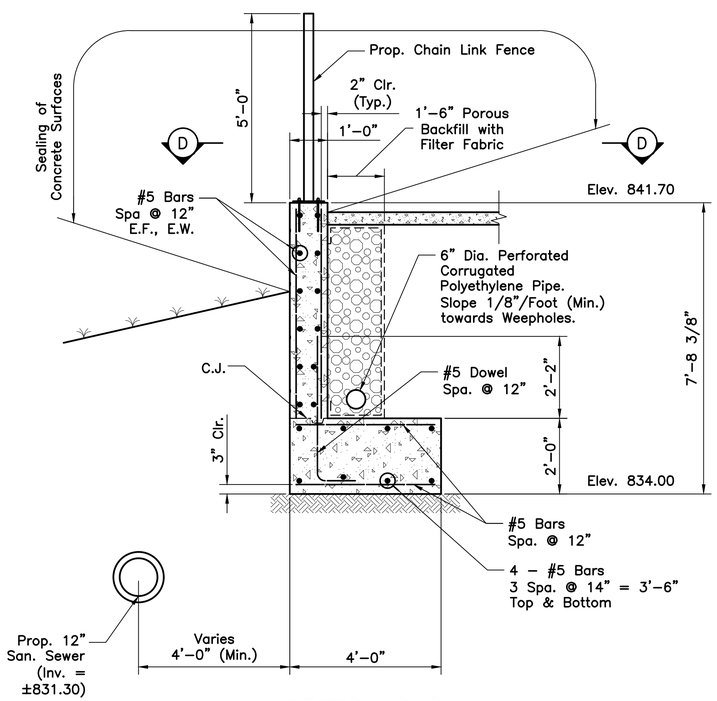
(1 1/2" = 1'-0")



SECTION D–D

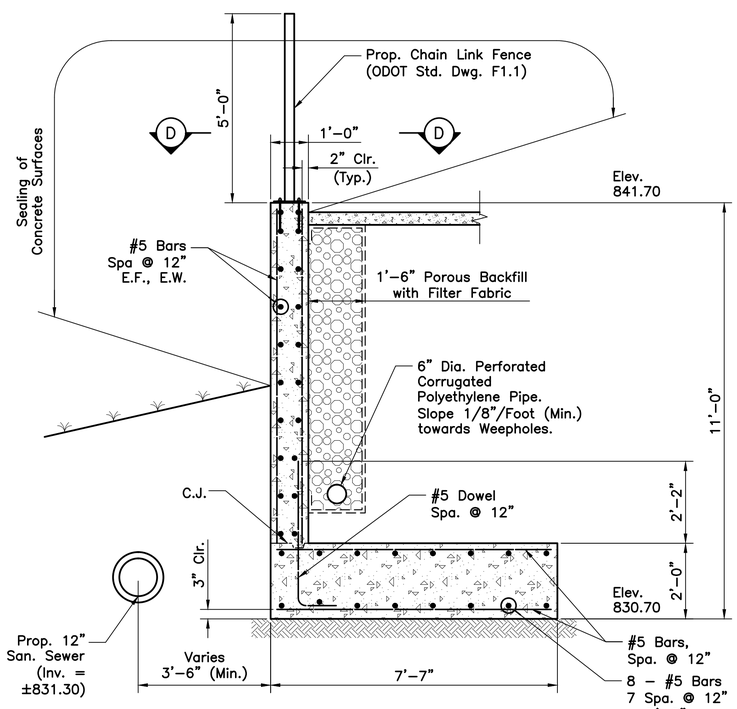
(1 1/2" = 1'-0")

RETAINING WALLS						
REF. NO.	STATION		SIDE	503	601	SPECIAL
				UNCLASSIFIED EXCAVATION	ROCK CHANNEL PROTECTION TYPE B WITH FILTER	RETAINING WALL
	FROM	TO		LUMP SUM	C.Y.	LUMP SUM
R1	124+00	124+90	RT	1	60	1
R2	124+72	125+15	LT	1	–	1
SHEET TOTALS				2	60	2



SECTION B–B

(1/2" = 1'-0")



SECTION C–C

(1/2" = 1'-0")

GENERAL NOTES

All labor, material, and equipment necessary to construct the retaining wall as detailed on these plans, including excavation, backfill, concrete, reinforcement, joints, drainage, fence and incidentals shall be included in the lump sum price bid for Retaining Walls.

All existing drainage courses shall be maintained during construction and placement of the proposed structure. The contractor shall submit to the City of Columbus a Schedule of Sequence and Method of maintaining the watercourse. Special attention shall be observed to insure that all erosion control features are installed and maintained throughout the duration of the project. Adequate precautions shall be taken to prevent concrete from freezing.

The contractor shall supply 6 sets of reinforcing steel shop drawings to XXX for a plan conformance review. Five sets of the reviewed drawings will be returned to the contractor for distribution.

The foundation, as designed, will produce a bearing pressure of 1.25 ton per square foot (2500 psf). Bottom of footings shall be cast against undisturbed earth.

If unsuitable bearing material occurs at the bottom of the footing elevation, the footing shown shall be deepened or widened to accommodate the changed condition. A registered soil engineer employed by the City of Columbus shall verify the suitability of the bearing material prior to placement of any concrete for the footing. The engineer must approve any changes in the footing.

Construction joints shall be provided as shown on the plans. Additional joints requested by the contractor shall be submitted for review and approval by the engineer. All vertical wall joints shall contain waterstop. Waterstop for vertical construction joints shall be approved prior to installation.

Porous backfill shall be placed behind the retaining wall and shall extend from below the walk to 6" below the weephole elevation. Place two cubic feet of bagged aggregate at each weephole.

Backfill shall not be placed and the structure shall not impound water until concrete has achieved 4000 psi. Water shall not be impounded against the structure until backfill is in place.

All exposed non–reentrant corners of concrete shall be cast with a 3/4" x 3/4" chamfer.

Railing shall be chain link fence. Posts that are to be mounted on wall shall be according to details on this sheet. Railing, posts, plates and anchors shall be galvanized.

All concrete surfaces above grade shall be treated with a clear sealer designed to protect concrete surfaces from graffiti. The material shall be applied in conformance with manufacturer's recommendations. One brand of sealer shall be used for all treated surfaces. Contractor shall provide owner with 5 gallons of unopened sealer for future use by owner. Cost of additional sealer provided to owner shall be included in the price for the wall. Sealer shall be approved prior to application.

HORIZ. 2 0 2 VERTICAL SCALE 2 0 2

CALCULATED

CHECKED

RETAINING WALLS SECTIONS AND GENERAL NOTES

PROJECT NAME

XXXX–E

X / XX

REVISED 12/2/11

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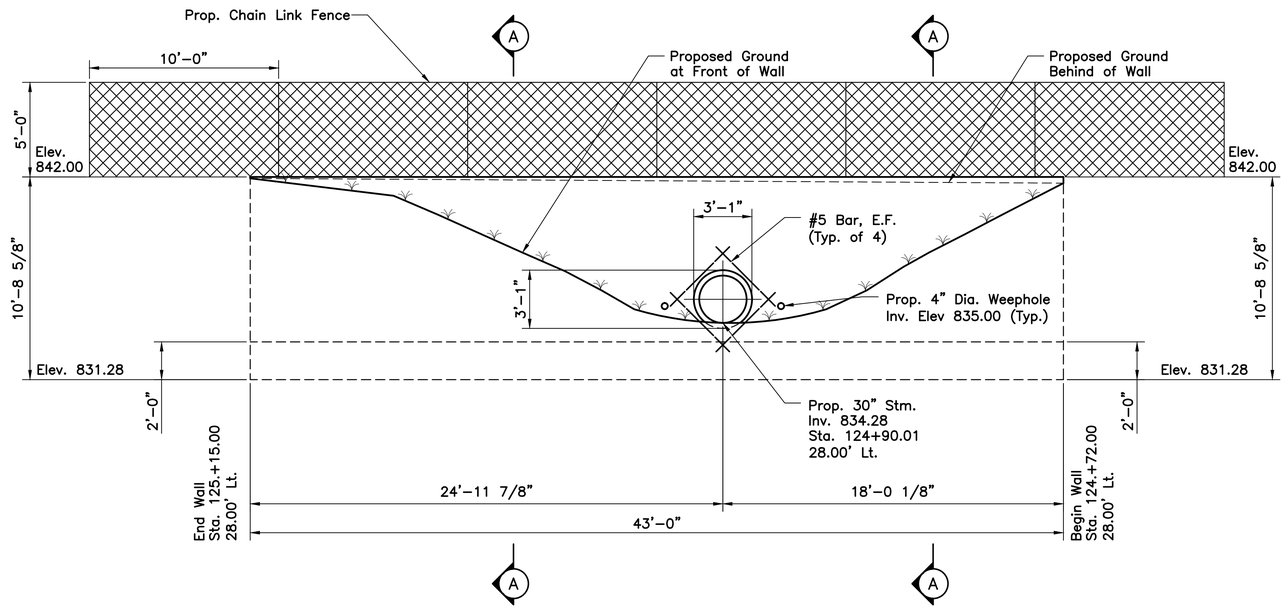
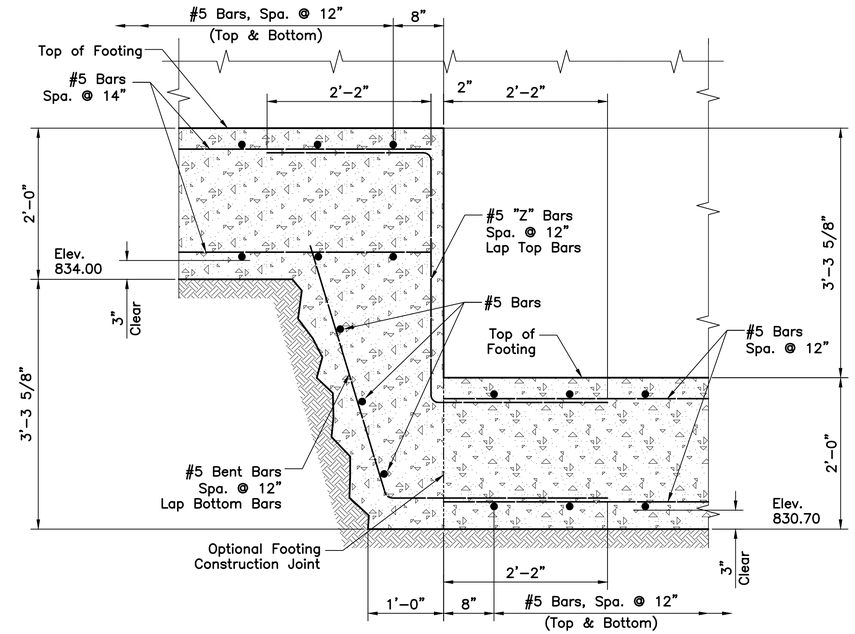
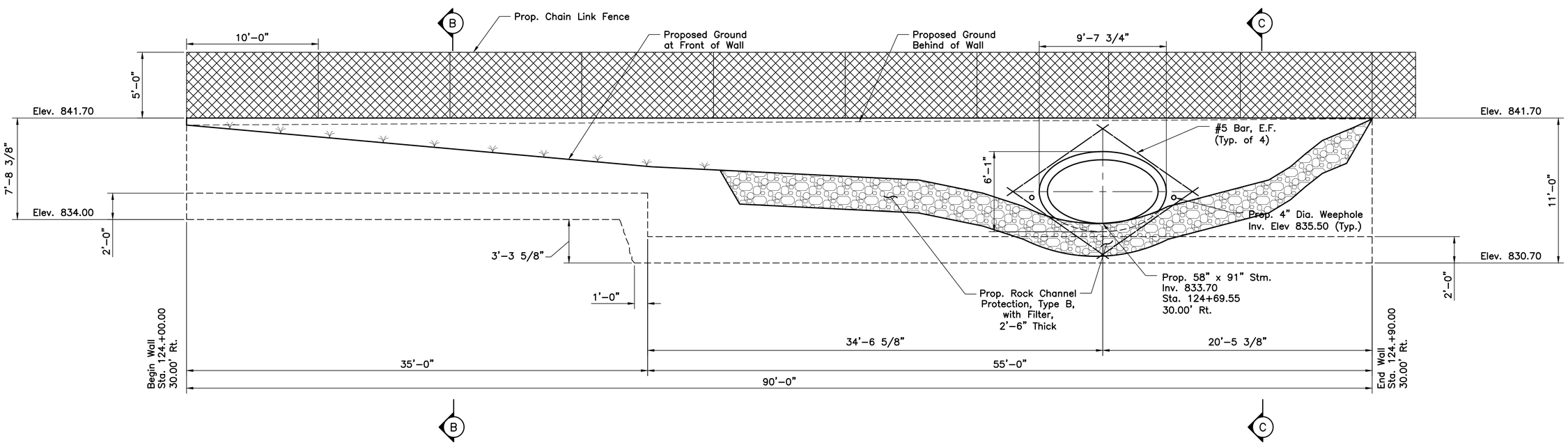


R2 – WEST WALL (WEST ELEVATION)



FOOTING STEP DETAIL

(1" = 1'-0")



R1 – EAST WALL (EAST ELEVATION)

HORIZ. VERTICAL SCALE

CALCULATED

CHECKED

RETAINING WALL DETAILS

PROJECT NAME

X
XX

XXXX–E

REVISED 12/2/11

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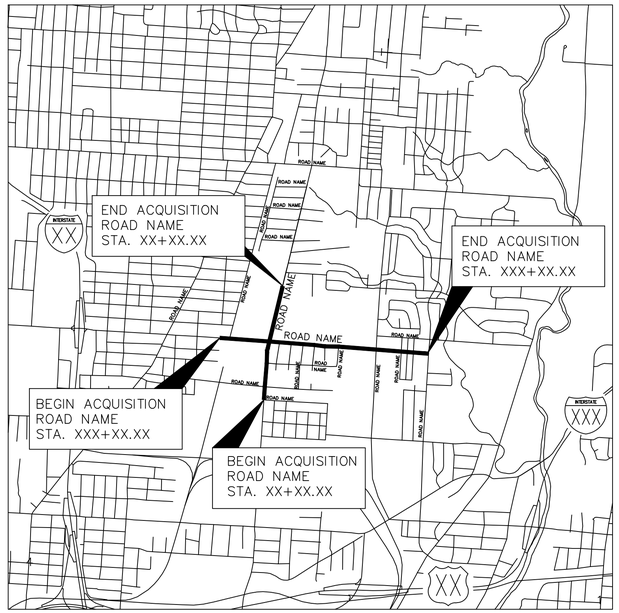
RIGHT OF WAY LEGEND SHEET

PROJECT NAME

CITY OF COLUMBUS
FRANKLIN COUNTY
QUARTER TOWNSHIP X, TOWNSHIP X, RANGE X
UNITED STATES MILITARY LANDS



LOCATION MAP

SCALE IN MILES

0 1/2 1 2

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2 – X
PROPERTY MAP	X – X
SUMMARY OF ADDITIONAL R/W	X – X
R/W TOGOGRAPHIC SHEET	X – X
R/W BOUNDARY SHEET	X – X

UTILITIES

'POWER

AMERICAN ELECTRIC POWER
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
CONTACT: ROD SLONEKER
PHONE: (614) 883–6817
CELL: (614) 301–4977
FAX: (614) 883–6868
EMAIL: risloneker@aep.com

DIVISION OF POWER AND WATER (POWER)
3500 INDIANOLA AVENUE
COLUMBUS, OHIO 43214
PHONE: (614) 645–7267
FAX: (614) 645–7150

WATER

DIVISION OF POWER AND WATER (WATER)
910 DUBLIN ROAD
COLUMBUS, OHIO 43215
CONTACT: BOB ARNOLD
PHONE: (614) 645–6558
EMAIL: rjarnold@columbus.gov

TELEPHONE & CABLE

AT&T
111 NORTH 4TH STREET
COLUMBUS, OHIO 43215
CONTACT: TOM ZIOMEK
PHONE: (614) 223–7162
CELL: (614) 329–2195
FAX: (614) 223–5579
EMAIL: tz7315@att.com

INSIGHT COMMUNICATIONS
3770 EAST LIVINGSTON AVENUE
COLUMBUS, OHIO 43227
CONTACT: MIKE BATH
PHONE: (614) 338–7061
CELL: (614) 332–2337
FAX: (614) 501–9513
EMAIL: bath.m@insightcom. com

LIST ALL UTILITIES LOCATED IN PROJECT AREA

UTILITIES NOTE:

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

LEGEND

EXISTING CONDITIONS

- CENTERLINE ROAD / DRIVE
- E/P — EDGE OF PAVEMENT
- CURB
- BERM
- ASPHALT OR CONCRETE DRIVE / WALK
- x — x — FENCE
- GUARDRAIL
- EX R/W — RIGHT–OF–WAY
- P/L — PROPERTY LINE
- LOT LINE
- ST — STORM
- SAN — SANITARY
- W — WATER
- DITCH
- GAS — UNDERGROUND GAS
- UGT — UNDERGROUND TELEPHONE
- UGE — UNDERGROUND ELECTRIC
- OHE — OVERHEAD ELECTRIC
- EX U — UTILITY EASEMENT (SPECIFY TYPE)
- TREE LINE
- OHT — OVERHEAD TELEPHONE
- OHFO — OVERHEAD FIBER OPTIC
- SECTION LINE
- RAILROAD
- SIGNS
- CITY OF COLUMBUS / CITY OF DUBLIN — MUNICIPAL BOUNDARY
- COMBINATION CURB & GUTTER
- CONCRETE WALL

- STONE WALL
- ROCK
- TREES
- BUSHES
- STUMP
- CONCRETE PAD
- WOOD POST
- POST / BOLLARD
- FLAG POLE
- PARKING BLOCK
- BIRDBATH
- HANDRAIL
- STEPS
- CATCH BASIN
- CURB INLET MANHOLE
- STORM MANHOLE
- CURB INLET
- BUILDING
- CANOPY
- TREE (TBR)

PROPOSED LAYOUT

- CONSTRUCTION CENTERLINE
- CENTERLINE PROPOSED DRIVE
- WORK LIMITS
- E/P — EDGE OF PAVEMENT
- CURB
- BERM
- WALK/SHARED–USE–PATH
- R/W — RIGHT–OF–WAY
- x — x — FENCE
- GUARDRAIL
- SAN — SANITARY
- ST — STORM (18" AND SMALLER)
- W — WATER
- DITCH
- SW — SEWER EASEMENT
- CH — CHANNEL EASEMENT
- TMP — TEMPORARY CONSTRUCTION EASEMENT

- COMBINATION CURB & GUTTER
- 24" STM — STORM (24" AND LARGER)
- ASPHALT OR CONCRETE DRIVE
- DETECTABLE WARNING
- PROPOSED FIRE HYDRANT
- WATER VALVE
- STM MH
- SAN MH
- CURB INLET
- CATCH BASIN

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1–800–362–2764
OHIO UTILITIES PROTECTION SERVICE
NON–MEMBERS
MUST BE CALLED DIRECTLY

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL
- OUTBUILDING

KEY

WD = WARRANTY DEED
SH = STANDARD HIGHWAY EASEMENT
SL = SLOPE EASEMENT
CH = CHANNEL EASEMENT
SW = SEWER EASEMENT
PR = PROPERTY RIGHT
T = TEMPORARY
P = PERMANENT

ABBREVIATIONS

1"WS.....1" WATER SERVICE
6"SS.....6" SANITARY SERVICE
1"GS.....1" GAS SERVICE
4"RD.....4" ROOF DRAIN
OHE.....OVERHEAD ELECTRIC
OHT.....OVERHEAD TELEPHONE
UGT.....UNDERGROUND TELEPHONE
CATV.....CABLE TELEVISION
(PA).....PREVIOUSLY ABANDONED
(DND).....DO NOT DISTURB
(TBA).....TO BE ABANDONED (SEE NOTE BELOW)
(TBR).....TO BE REMOVED
(TBRL).....TO BE RELOCATED
(RTG).....RECONSTRUCT TO GRADE
(ATG).....ADJUST TO GRADE
(ENC).....ENCROACHMENT TO REMAIN UNLESS OTHERWISE DIRECTED BY THE ENGINEER–IN–CHARGE
(ENC–TBR).....ENCROACHMENT TO BE REMOVED BY THIS PROJECT

EXISTING UTILITY SYMBOLS

- GUY ANCHOR
- MB — MAILBOX
- SIGNAL POLE
- S — SANITARY MANHOLE
- FIRE HYDRANT
- WATER VALVE
- PB — PULL BOX
- TELEPHONE POLE
- G — GAS VALVE
- CO — CLEAN OUT
- W — WATER METER
- T — TELEPHONE MANHOLE
- TELEPHONE ELECTRIC POLE
- ELECTRIC POLE
- ELECTRIC LIGHT POLE
- T — TELEPHONE PULL BOX
- LIGHT POLE
- TSC — TRAFFIC SIGNAL CONTROL BOX

SURVEY SYMBOLS

- IRON PIN/RAILROAD SPIKE FND.
- MAG/PK NAIL FND.
- RAILROAD SPIKE SET
- M — RIGHT–OF–WAY MON. FND.
- MAG/PK NAIL SET
- B-1 — SOIL BORING
- BENCHMARK
- IRON PIN SET

PROJECT DESCRIPTION

XXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXX
XXXXXXXXXXXXXXX XXXXXXXXXX XXXXXX XXXXXXXXXXXXX
XXXXXXXXXXXXXXXX XXXXXXXXX XXXXXXXX XXXXXXXXX
XXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXX

THE EXISTING AND PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY TO EITHER XXXXX AVENUE OR XXXXX AVENUE.

PROJECT CONTROL

STATE PLANE GRID - OHIO SOUTH NAD83(CORS96)

PLANS PREPARED BY:

FIRM NAME: XXXXXXXXXXXXXX
R/W DESIGNER: XXXXX XXXXXXX
R/W REVIEWER: XXXXX XXXXXXXX
FIELD REVIEWER: XXXXX XXXXXXX
PRELIMINARY FIELD REVIEW DATE: XX/XX/XXXX
TRACINGS FIELD REVIEW DATE: XX/XX/XXXX
OWNERSHIP UPDATED BY: XXXXX XXXXXXX
DATE COMPLETED: XX/XX/XXXX
PLAN COMPLETION DATE: XX/XX/XXXX

SURVEYOR CERTIFICATION:

I, _____, PS HAVE CALCULATED THE GROSS TAKE, PRESENT ROADWAY OCCUPIED (PRO), NET TAKE, AND NET RESIDUE; AS WELL AS PREPARED THE LEGAL DESCRIPTIONS NECESSARY TO ACQUIRE THE PARCELS AS SHOWN HEREIN. _____, PS DETERMINED THE LOCATIONS OF THE EXISTING PROPERTY LINES FOR THE PROPERTY TAKES CONTAINED HEREIN. THIS WORK WAS DONE IN ACCORDANCE WITH THE OHIO ADMINISTRATIVE CODE CHAPTER 4733–37 COMMONLY KNOWN AS THE MINIMUM STANDARDS FOR BOUNDARY SURVEYS IN THE STATE OF OHIO UNLESS SO NOTED. THE WORDS I AND MY AS USED HEREIN, ARE TO MEAN THAT EITHER MYSELF OR SOMEONE WORKING FOR ME UNDER MY DIRECT CONTROL OR SUPERVISION.

XXXXX XXXXXXX, PS – OHIO LIC. # XXXX

SURVEYORS SEAL

STATE OF OHIO
XXXXXX
X.
XXXXXXXXX
X–XXXX
REGISTERED
PROFESSIONAL SURVEYOR

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: XX/XX DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX

XXXX DR E

RIGHT OF WAY LEGEND SHEET

PROJECT NAME

X / X

XX
XX

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MONUMENTS TO BE SET DURING CONSTRUCTION					
STATION	DISTANCE FROM ℄	ADJUSTABLE ℄ MONUMENT	COORDINATES		DESCRIPTION
			NORTHING	EASTING	
75+27.72	XX.X' LT	1	XXXXXX.XX	XXXXXX.XX	ROAD NAME PC
76+60.58	XX.X' RT	1	XXXXXX.XX	XXXXXX.XX	ROAD NAME PT
78+16.60	XX.X' RT	1	XXXXXX.XX	XXXXXX.XX	ROAD NAME PI, AND ROAD NAME PI
90+48.12	XX.X' LT	1	XXXXXX.XX	XXXXXX.XX	ROAD NAME PI
210+32.85	XX.X' RT	1	XXXXXX.XX	XXXXXX.XX	ROAD NAME PI
			XXXXXX.XX	XXXXXX.XX	
TOTAL		5	XXXXXX.XX	XXXXXX.XX	

FRANKLIN COUNTY
CITY OF COLUMBUS
TOWNSHIP X, RANGE X
QUARTER TOWNSHIP X
UNITED STATES MILITARY LANDS

THE HORIZONTAL COORDINATES EXPRESSED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATES SYSTEM NAD83 (NSRS 2007), SOUTH ZONE. THE VERTICAL DATUM IS ON NAVD88.

BASIS OF BEARINGS AND COORDINATES:

(DEFINE METHOD USED TO ESTABLISH BASIS OF BEARINGS)
THE BASIS OF BEARINGS WERE ESTABLISHED BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED STATIONS IN THE OHIO DEPARTMENT OF TRANSPORTATION VIRTUAL REFERENCE SYSTEM (VRS). THE PORTION OF THE CENTERLINE OF **ROAD NAME**. HAVING A BEARING OF N 13°32'54" E FROM STATION 78+16.60 TO STATION 90+48.12 AND MONUMENTED AS SHOWN HERON, IS DESIGNATED THE "BASIS OF BEARING" FOR THIS PLAN.

SOURCE BENCHMARK

(DEFINE SOURCE BENCHMARK TO INCLUDE STATE PLAN COORDINATES & ELEVATION)
FCE MONUMENT COC45–82 (735943.597 N, 1855621.207 E, ELEV.: 836.636) WAS OBSERVED AS A CHECK AND WAS OBSERVED TO BE 0.030' NORTH, 0.013' EAST AND 0.011' IN ELEVATION DIFFERENT THAN PUBLISHED VALUES.

BASIS OF EXISTING R/W WIDTH AND LOCATION:

THE EXISTING CENTERLINE & R/W WIDTH AND LOCATION WERE DETERMINED USING DOCUMENTATION ON FILE FROM THE CITY OF COLUMBUS AND EXISTING MONUMENTATION FOUND IN THE CENTERLINE AND ALONG THE RIGHT OF WAY.

IF REQUIRED BY THE CITY OF COLUMBUS CENTERLINE MONUMENTS ARE TO BE PAID FOR UNDER THE FOLLOWING:

ITEM 604 (40501) CENTERLINE MONUMENT X EACH
QUANTITY CARRIED TO GENERAL SUMMARY

MONUMENTS TO BE SET DURING CONSTRUCTION:

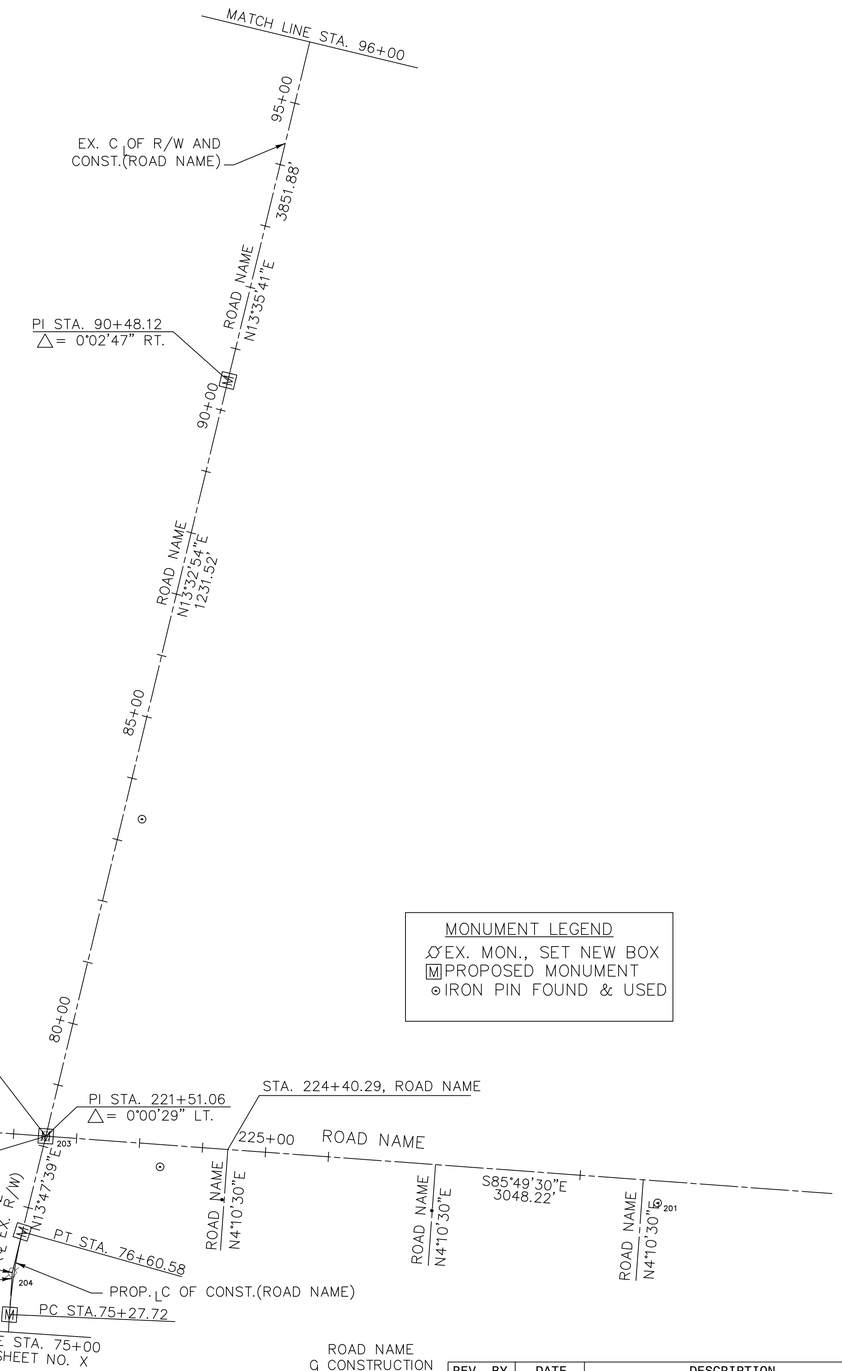
ALL IRON PINS SET ARE 5/8" REBAR (30"LONG) WITH A YELLOW PLASTIC CAP STAMPED "R/W **COMPANY NAME**" AND ARE TO BE PLACED AT THE COMPLETION OF CONSTRUCTION BY THE CITY OF COLUMBUS SURVEY DEPARTMENT.

THE PLACING OF MONUMENTS SHALL BE UNDER THE DIRECTION OF A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET UPON COMPLETION OF CONSTRUCTION.

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF PROPOSED RIGHT OF WAY AND CONSTRUCTION.

CENTERLINE MONUMENTS FOUND & USED					
PT	STATION	DISTANCE FROM ℄	NORTHING	EASTING	DESCRIPTION
200	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	RR SPK
201	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	1" IRON PIN
202	XX+XX.XX	XX.X' RT	XXXXXX.XX	XXXXXX.XX	1" IRON PIN
203	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	RR SPK
204	XX+XX.XX	XX.X' RT	XXXXXX.XX	XXXXXX.XX	RR SPK
205	XX+XX.XX	XX.X' RT	XXXXXX.XX	XXXXXX.XX	RR SPK
206	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	RR SPK
207	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	1" IRON PIN
208	XX+XX.XX	XX.X' RT	XXXXXX.XX	XXXXXX.XX	1" IRON PIN
209	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	RR SPK
210	XX+XX.XX	XX.X' LT	XXXXXX.XX	XXXXXX.XX	1" IRON PIN

FOR OTHER MONUMENTS FOUND AND USED, SEE SHEET X



I, _____, PS HAVE CALCULATED THE GROSS TAKE, PRESENT ROADWAY OCCUPIED (PRO), NET TAKE, AND NET RESIDUE; AS WELL AS PREPARED THE LEGAL DESCRIPTIONS NECESSARY TO ACQUIRE THE PARCELS AS SHOWN HEREIN. _____, PS DETERMINED THE LOCATIONS OF THE EXISTING PROPERTY LINES FOR THE PROPERTY TAKES CONTAINED HEREIN. THIS WORK WAS DONE IN ACCORDANCE WITH THE OHIO ADMINISTRATIVE CODE CHAPTER 4733-37 COMMONLY KNOWN AS THE MINIMUM STANDARDS FOR BOUNDARY SURVEYS IN THE STATE OF OHIO UNLESS SO NOTED. THE WORDS I AND MY AS USED HEREIN, ARE TO MEAN THAT EITHER MYSELF OR SOMEONE WORKING FOR ME UNDER MY DIRECT CONTROL OR SUPERVISION.

XXXXX XXXXXXX, PS – OHIO LIC. # XXXX

STATE OF OHIO
XXXXX X. XXXXXXX S-XXXX
REGISTERED PROFESSIONAL SURVEYOR

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

ROAD NAME
℄ CONSTRUCTION
CURVE DATA

P.I. STA. 75+94.32
Δ = 9°57'51" RT.
D = 7°30'00"
R = 763.94'
L = 132.85'
T = 66.60'
E = 2.90'
CH = 132.69'
CHB = N 81°11'17"E

REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY: XX/XX		DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX		DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX		

XXXX DR E

HORIZONTAL SCALE IN FEET 0 120 240

CALCULATED
CHECKED

CENTERLINE PLAT
ROAD NAME AND ROAD NAME INTERSECTION

PROJECT NAME

X / X

XX
XX

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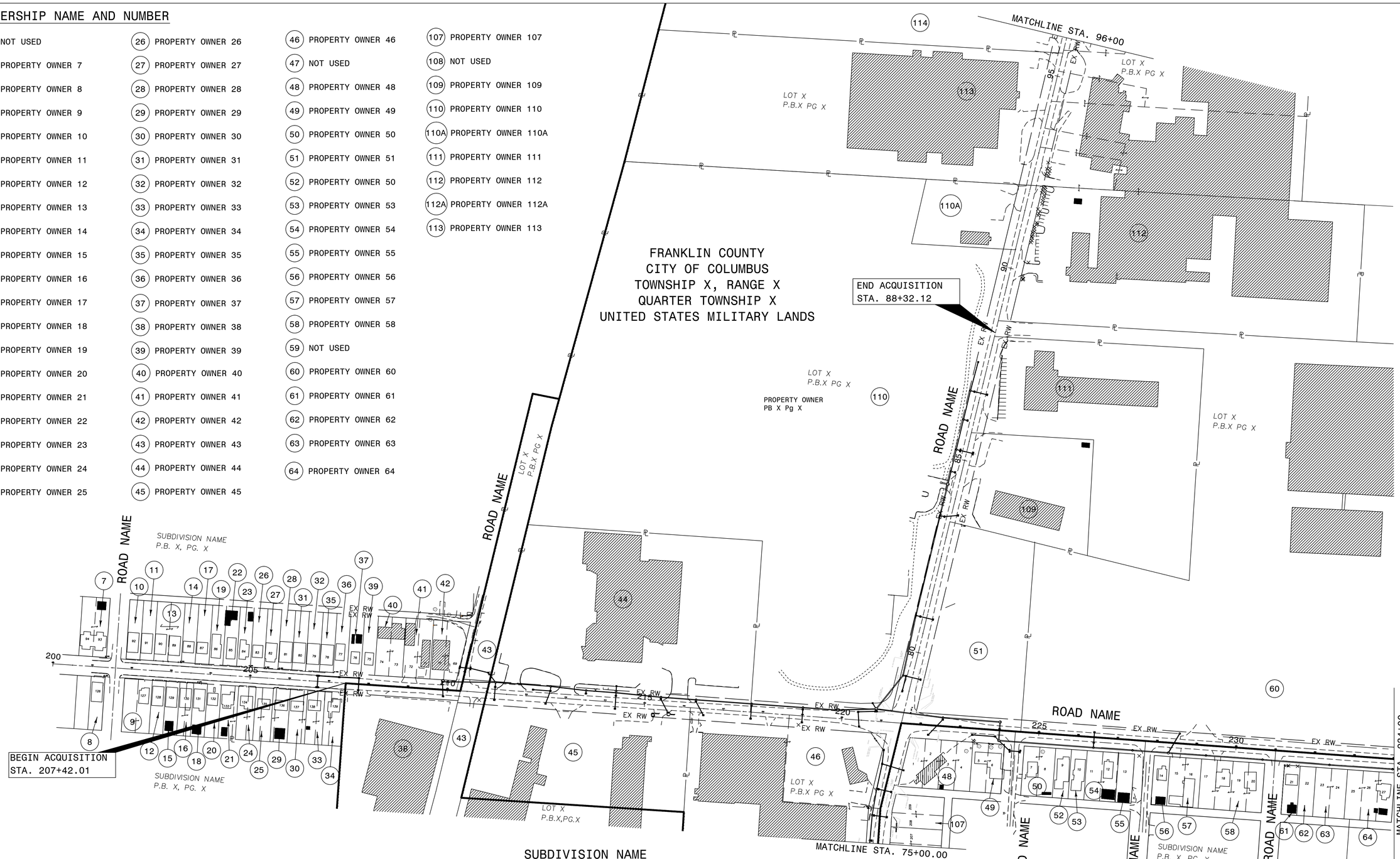
OWNERSHIP NAME AND NUMBER

1-6 NOT USED	26 PROPERTY OWNER 26	46 PROPERTY OWNER 46	107 PROPERTY OWNER 107
7 PROPERTY OWNER 7	27 PROPERTY OWNER 27	47 NOT USED	108 NOT USED
8 PROPERTY OWNER 8	28 PROPERTY OWNER 28	48 PROPERTY OWNER 48	109 PROPERTY OWNER 109
9 PROPERTY OWNER 9	29 PROPERTY OWNER 29	49 PROPERTY OWNER 49	110 PROPERTY OWNER 110
10 PROPERTY OWNER 10	30 PROPERTY OWNER 30	50 PROPERTY OWNER 50	110A PROPERTY OWNER 110A
11 PROPERTY OWNER 11	31 PROPERTY OWNER 31	51 PROPERTY OWNER 51	111 PROPERTY OWNER 111
12 PROPERTY OWNER 12	32 PROPERTY OWNER 32	52 PROPERTY OWNER 50	112 PROPERTY OWNER 112
13 PROPERTY OWNER 13	33 PROPERTY OWNER 33	53 PROPERTY OWNER 53	112A PROPERTY OWNER 112A
14 PROPERTY OWNER 14	34 PROPERTY OWNER 34	54 PROPERTY OWNER 54	113 PROPERTY OWNER 113
15 PROPERTY OWNER 15	35 PROPERTY OWNER 35	55 PROPERTY OWNER 55	
16 PROPERTY OWNER 16	36 PROPERTY OWNER 36	56 PROPERTY OWNER 56	
17 PROPERTY OWNER 17	37 PROPERTY OWNER 37	57 PROPERTY OWNER 57	
18 PROPERTY OWNER 18	38 PROPERTY OWNER 38	58 PROPERTY OWNER 58	
19 PROPERTY OWNER 19	39 PROPERTY OWNER 39	59 NOT USED	
20 PROPERTY OWNER 20	40 PROPERTY OWNER 40	60 PROPERTY OWNER 60	
21 PROPERTY OWNER 21	41 PROPERTY OWNER 41	61 PROPERTY OWNER 61	
22 PROPERTY OWNER 22	42 PROPERTY OWNER 42	62 PROPERTY OWNER 62	
23 PROPERTY OWNER 23	43 PROPERTY OWNER 43	63 PROPERTY OWNER 63	
24 PROPERTY OWNER 24	44 PROPERTY OWNER 44	64 PROPERTY OWNER 64	
25 PROPERTY OWNER 25	45 PROPERTY OWNER 45		



REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: XX/XX DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX

XXXX DR E

CALCULATED
CHECKED

PROPERTY MAP
ROAD NAME AND ROAD NAME INTERSECTION

PROJECT NAME

X / X

XX
XX

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TOTAL NUMBER OF:

X OWNERSHIPS
X PARCELS
X TOTAL TAKES
X OWNERSHIPS W/STRUCTURES INVOLVED

NET RESIDUE = RECORDED AREA – TOTAL PRO – NET TAKE

ALL AREAS IN ACRES

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
THE CITY OF COLUMBUS, OHIO
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S		TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE		TYPE FUND	REMARKS COLUMN	AS ACQUIRED
			BOOK/PAGE	PARCEL NUMBER	RECORD AREA						LEFT	RIGHT			INSTRUMENT
33	PROPERTY OWNER 33	X, X–X	DB 3307 PG 578	010–016065	0.136*								CITY	NO R/W REQUIRED	
			DB 2184 PG 672												
34	PROPERTY OWNER 34	X, X–X	DB 2232 PG 285	010–016066	0.156*								CITY	NO R/W REQUIRED, ** 34' FENCE	
35	PROPERTY OWNER 35	X, X–X	I.N. 200804300066441	010–029918	0.121*								CITY	NO R/W REQUIRED	
36	PROPERTY OWNER 36	X, X–X	I.N. 200802280030307	010–029917	0.121*								CITY	NO R/W REQUIRED	
37–T	PROPERTY OWNER 37	X, X–X	I.N. 200502030021187	010–033735	0.121*		0.001		0.001				CITY	NO R/W REQUIRED, ** 35' FENCE	
38–T	PROPERTY OWNER 38	X, X–X	OR 21452 J12	010–014645	3.870		0.023		0.023				CITY	TO RECONSTRUCT A DRIVEWAY ** 6' FENCE	
39–T	PROPERTY OWNER 39	X, X–X	I.N. 200704200069528	010–033734	0.121*		0.005		0.005				CITY	** 35' FENCE, FOR GRADING	
40–T	PROPERTY OWNER 40	X, X–X	I.N. 201007190090605	010–052681	0.121*								CITY	TO RECONSTRUCT A DRIVEWAY, ** 66' FENCE	
				010–052680	0.121*										
				TOTAL	0.242*		0.026		0.026						
41–T	PROPERTY OWNER 41	X, X–X	I.N. 201007190090604	010–054233	0.121*		0.020		0.020				CITY	** 62' FENCE IN E. 17TH ROW	
				010–054232	0.121*									TO RECONSTRUCT A DRIVEWAY	
				TOTAL	0.242*										
42–WD	PROPERTY OWNER 42	X, X–X	I.N. 200510130215231	010–033733	0.121*		0.023	0.000	0.023		0.098		CITY		
42–T		X, X–X		010–033732	0.155		0.051		0.051						
				TOTAL	0.276*										
43–WD	PROPERTY OWNER 43	X, X–X	I.N. 201010070132388	010–244168	18.915*	0.092	0.144	0.092	0.052			18.771	CITY		
43–S		X, X–X					0.026		0.026						
43–T		X, X–X					0.007		0.007					TO RECONSTRUCT A DRIVEWAY	
44–WD	PROPERTY OWNER 44	X, X–X	DB 3598 PG 725	010–098450	6.345	0.459	0.511	0.459	0.052		5.834		CITY		
44–S1		X, X–X					0.045		0.045						
44–S2		X, X–X					0.005		0.005						
44–T1		X, X–X					0.045		0.045						
44–T2		X, X–X					0.087		0.087						
44–T3		X, X–X					0.156		0.156						
45–T	PROPERTY OWNER 45	X, X–X	I.N. 200512020253597	010–108185	10.894		0.123		0.123				CITY		
46–WD	PROPERTY OWNER 46	X, X–X	I.N. 200807110106974	010–108429	2.9658		0.023	0.000	0.023			2.943	CITY		
46–T		X, X–X	I.N. 200606210121615	010–108394	0.995		0.238		0.238					TO RECONSTRUCT A DRIVEWAY	
48–WD	PROPERTY OWNER 48	X, X–X	I.N. 200009250194502	010–108440	0.488*		0.019	0.000	0.019			0.469	CITY		
48–S		X, X–X					0.006		0.006						
48–T1		X, X–X					0.008		0.008						
48–T2		X, X–X					0.081		0.081						
49–WD	PROPERTY OWNER 49	X, X–X	OR 15404 E03	010–108444	0.115		0.001	0.000	0.001				CITY	** 4' BUILDING AND ** 235' OF FENCE	
49–S		X, X–X		010–108445	0.115		0.003		0.003						
49–T		X, X–X		TOTAL	0.230*		0.008		0.008					FOR GRADING	

LEGEND:
WD = WARRANTY DEED
SH = STANDARD HIGHWAY EASEMENT
SL = SLOPE EASEMENT
CH = CHANNEL EASEMENT
PR = PROPERTY RIGHT
T = TEMPORARY CONSTRUCTION EASEMENT
P = PERMANENT EASEMENT
S = SEWER EASEMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF XX MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

* CALCULATED AREA

** DENOTES RIGHT OF WAY ENCROACHMENT

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: XX/XX DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX

XXXX DR E

SUMMARY OF ADDITIONAL RIGHT–OF–WAY (PARCELS X–X)

PROJECT NAME

X / X

XX
XX

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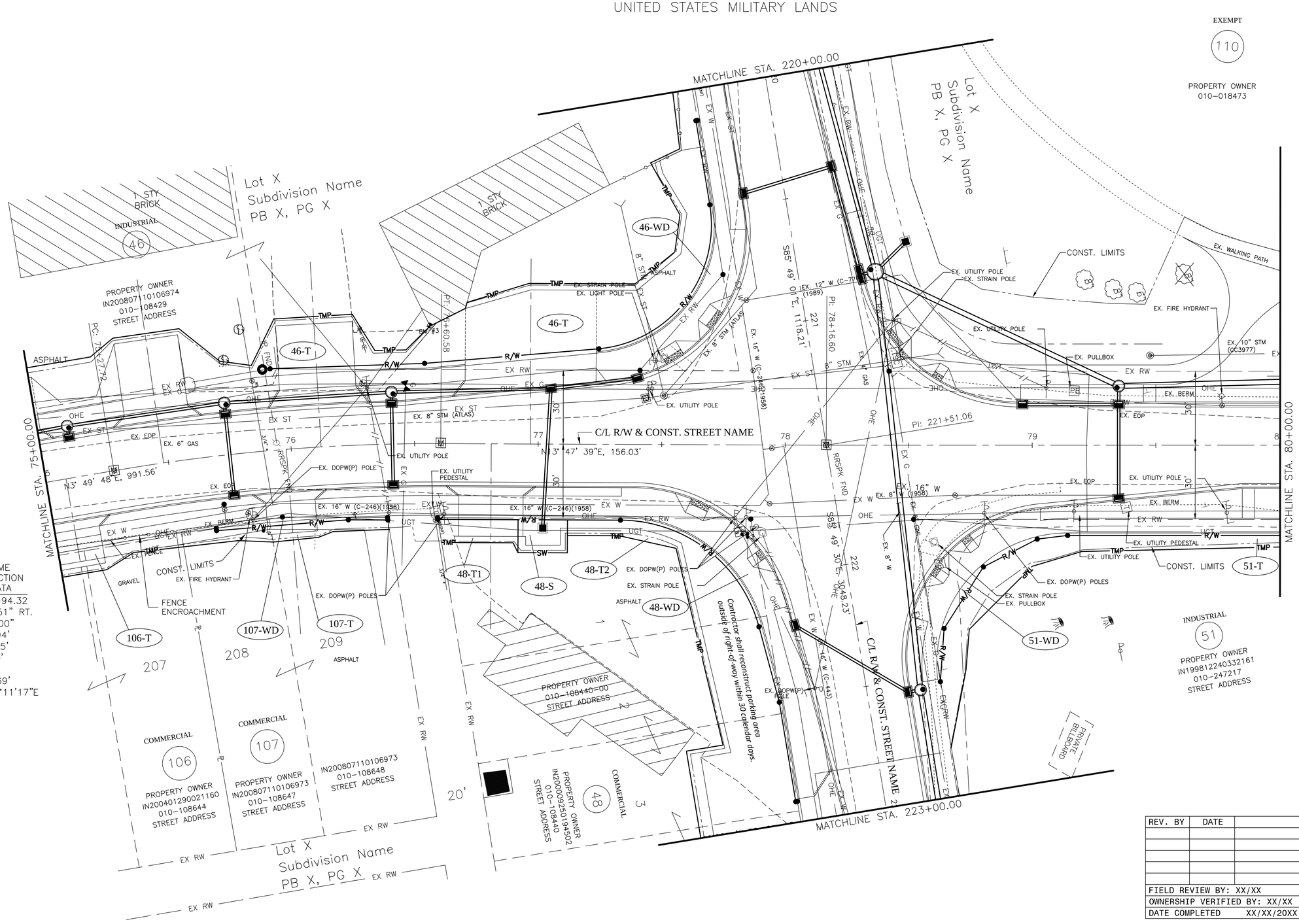
FRANKLIN COUNTY
CITY OF COLUMBUS
TOWNSHIP X, RANGE X
QUARTER TOWNSHIP X
UNITED STATES MILITARY LANDS



ROAD NAME
℄ CONSTRUCTION
CURVE DATA

P.I. STA. 75+94.32
Δ = 9°57'51" RT.
D = 7°30'00"
R = 763.94'
L = 132.85'
T = 66.60'
E = 2.90'
CH = 132.69'
CHB = N 81°11'17"E

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: XX/XX DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX

XXXX DR E

0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

RIGHT OF WAY TOPO SHEET
STA. XX+XX TO STA. XX+XX

PROJECT NAME

X / X

XX
XX

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FRANKLIN COUNTY
CITY OF COLUMBUS
TOWNSHIP X, RANGE X
QUARTER TOWNSHIP X
UNITED STATES MILITARY LANDS

LINE DATA

(1)	N 71°42'35" E 17.30'
(2)	N 12°19'30" E 12.56'
(3)	N 31°08'10" W 13.74'
(4)	N 12°48'16" W 15.99'
(5)	NOT USED
(6)	N 4°11'29" E 20.46'
(7)	NOT USED
(8)	S 86°20'13" E 5.14'
(9)	S 7°01'46" W 20.34'
(10)	S 18°47'24" E 13.00'
(11)	S 85°49'30" E 1.00'
(12)	S 85°49'30" E 9.83'
(13)	S 37°53'26" E 20.53'
(14)	S 89°45'16" E 16.00'
(15)	N 68°11'37" E 6.4'
(16)	S 87°37'35" E 14.00'
(17)	N 35°34'20" W 51.30'
(18)	NOT USED
(19)	S 7°36'19" W 18.18'
(20)	N 83°10'51" W 1.00'
(21)	N 85°49'30" W 9.47'
(22)	S 76°12'21" E 10.00'
(23)	S 13°47'39" W 9.00'
(24)	N 85°49'30" W 0.68'
(25)	NOT USED
(26)	NOT USED
(27)	N 85°49'30" W 12.96'
(28)	S 76°12'21" E 6.33'
(29)	N 85°49'30" E 27.00'
(30)	S 72°25'57" E 21.59'
(31)	S 43°54'01" E 29.57'
(32)	S 13°45'01" E 24.50'
(33)	N 6°36'28" E 12.41'

ROAD NAME
℄ CONSTRUCTION
CURVE DATA

P.I. STA. 75+94.32
Δ = 9°57'51" RT.
D = 7°30'00"
R = 763.94'
L = 132.85'
T = 66.60'
E = 2.90'
CH = 132.69'
CHB = N 81°11'17"E

CURVE DATA

(A) L= 82.50
R= 50.33
Δ= 93° 54' 46"
CH=73.57'
CHB=S 38°51'38" W

(B) L= 76.02
R= 58.33
Δ= 74° 40' 13"
CH=70.76'
CHB=S 51°07'45" W

0 20 40 HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY: XX/XX DATE: XX/XX/20XX
OWNERSHIP VERIFIED BY: XX/XX DATE: XX/XX/20XX
DATE COMPLETED XX/XX/20XX

XXXX DR E

RIGHT OF WAY BOUNDARY SHEET
STA. XX+XX TO STA. XX+XX

PROJECT NAME

X / X

XX
XX

REVISED 9/19/14
J:\Design and Construction\Design\Plan Review_SAMPLE SHEETS (E-Plan)\CAD Drawings\20_06 RW BOUNDARY.dwg (20_06 RW BOUNDARY)