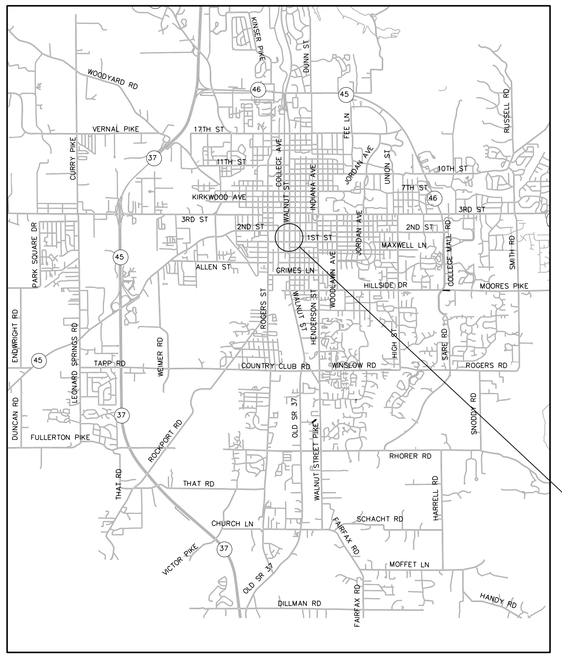
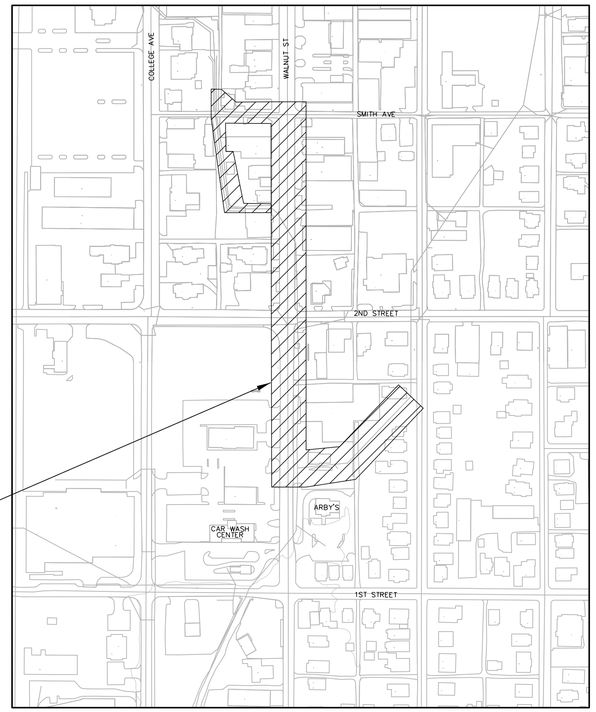
CITY OF BLOOMINGTON, IN
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
DECEMBER 2, 2011



PROJECT LOCATION MAP

SCALE N.T.S.



PROJECT SITE MAP

SCALE: N.T.S.

DRAWING NO.	SHEET NO.	TITLE
–	1	TITLE SHEET
G1–G3	2–4	GENERAL NOTES / LEGEND
E1	5	EASEMENT AND PROPERTY USE PLAN
L1	6	SITE LAYOUT AND GEOMETRICS
R1–R6	7–12	REMOVAL PLANS
P1–P12	13–24	UTILITY PLANS AND PROFILES
SR1–SR6	25–30	SURFACE RESTORATION PLANS
PJ1–PJ3	31–33	PAVEMENT JOINTS AND STREET LIGHTING
M1–M7	34–40	MISCELLANEOUS DETAILS
S1–S10	41–49	STRUCTURAL DETAILS
T1–T5	50–54	MAINTENANCE OF TRAFFIC PLAN
TS1	55	2ND STREET TRAFFIC SIGNAL
CS1–CS18	56–73	CROSS SECTIONS

CERTIFIED: Paul N. Elling

DATE: 12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

PREPARED BY

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PROJECT NOS.....CBU D00–19 & D00–23

PREPARED FOR

CITY OF BLOOMINGTON

UTILITIES - STORM / SANITARY / WATER IMPROVEMENTS
PUBLIC WORKS - WALNUT STREET STREETSCAPE

UTILITIES

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COMCAST
1600 W VERNAL PIKE
BLOOMINGTON, IN 47404
ATTN: SCOTT TEMPLETON
(812) 822-3262
EMERGENCY (812) 325-8441

TELEPHONE
AMERITECH
4517 E INDIANA BELL CT
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ATTN: BRENT MCCABE
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ELECTRIC
DUKE ENERGY
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GAS
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FIBER OPTIC
WINDSTREAM/KDL
3701 COMMUNICATIONS WAY
EVANSVILLE, IN 47715
ATTN: TOM HATHAWAY
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SEWER & WATER
CITY OF BLOOMINGTON UTILITIES
600 EAST MILLER DRIVE
BLOOMINGTON, IN 47402
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EMERGENCY (812) 339-1444

TOPOGRAPHIC NOTES

THE TOPOGRAPHIC MAPPING IS BASED ON GROUND SURVEY PERFORMED DURING SEVERAL TIME PERIODS. THE ORIGINAL SURVEY WAS PERFORMED IN THE SUMMER OF 2000. AN ADDITIONAL PROJECT SURVEY WAS PERFORMED IN THE SUMMER OF 2008. SURVEY WORK PERFORMED FOR STREETSCAPE IMPROVEMENTS WAS ALSO INCORPORATED INTO THE DRAWINGS IN 2009 COVERING PREVIOUSLY SURVEYED AREAS AND ADDITIONAL PROJECT AREAS. SOME AS BUILT INFORMATION FROM THE DOWNSTREAM CULVERT WORK WAS ALSO INCORPORATED. DISCREPANCIES BETWEEN THE VARIOUS SURVEY DATUMS WERE NOTED AND THE DATUMS WERE ADJUSTED TO THE ORIGINAL 2000 SURVEY TO CREATE THE DRAWINGS SHOWN. THE DRAWINGS WERE FURTHER ADJUSTED FOR OBSERVED FIELD CHANGES DUE TO DEVELOPMENT ACTIVITIES. SOME DEVELOPMENT ACTIVITIES HAVE OCCURRED IN THE VICINITY OF BENCHMARKS AND MAY HAVE RENDERED THOSE BENCHMARKS INACCURATE. DUE TO THE AGE OF SOME OF THE DATA, THE DIFFERING SOURCES OF SURVEY DATA, AND THE NOTED DATUM ADJUSTMENTS, IT IS POSSIBLE THAT DISCREPANCIES EXIST BETWEEN THESE DRAWINGS AND FIELD CONDITIONS AT THE TIME OF BIDDING.

CONTRACTOR IS THEREFORE DIRECTED TO CONFIRM PROJECT BENCHMARKS, ELEVATIONS, AND ALL EXISTING CONDITIONS WITHIN THE PROJECT AREA PRIOR TO COMMENCING FIELD ACTIVITIES. CONTACT THE ENGINEER FOR DIRECTION IF SIGNIFICANT DISCREPANCIES ARE DISCOVERED.

THIS PROJECT IS INTENDED TO REDEVELOP THE WALNUT STREET CORRIDOR AND MUST MATCH EXISTING CONDITIONS AT THE STREET RIGHT-OF-WAY LINES OR AT THE EASEMENT LIMITS AS APPROPRIATE. ACCORDINGLY FIELD ALTERATIONS SHOULD BE ANTICIPATED TO BE REQUIRED IN SOME LOCATIONS BY THE CONTRACTOR TO ADJUST THE FINAL ELEVATIONS AND LOCATIONS OF PROJECT FEATURES TO CONFORM TO THE EXISTING CONDITIONS. ADDITIONAL COMPENSATION TO PERFORM THESE FIELD ADJUSTMENTS WILL NOT BE PROVIDED AND SHOULD BE ANTICIPATED IN THE BID PRICES.

GENERAL NOTES

WORK DESCRIPTION: THIS PROJECT INCLUDES THE RECONSTRUCTION OF 350 FT OF THE JORDAN RIVER CULVERT AND A 1200 FT SECTION OF THE LOWER SPANKER'S CULVERT WITH NEW 20' X 5'-4", 16' X 5'-4" AND 12' X 5'-4" REINFORCED CONCRETE BOX CULVERTS. THE NEW CULVERTS WILL REPLACE THE EXISTING DETERIORATING MASONRY ARCH CULVERTS WHICH ARE TO BE ABANDONED OR REMOVED AS INDICATED. AT SEVERAL LOCATIONS THE NEW CULVERTS ARE VERY CLOSE TO EXISTING BUILDINGS AND THE WORK WILL INCLUDE SHORING, UNDERPINNING, OR OTHER PROTECTION WHICH MAY BE NECESSARY TO PROTECT THE EXISTING STRUCTURES. ALSO INCLUDED WITH THE WORK IS THE REPLACEMENT OF SANITARY SEWERS AND WATER MAINS AS WELL AS THE INSTALLATION OF NEW STORM SEWERS CONNECTED TO THE PROPOSED CULVERTS. RESTORATION OF THE PROJECT AREA WILL CONFORM TO A STREETSCAPE PLAN DEVELOPED FOR THE PROJECT WHICH INCLUDES PAVEMENT RECONSTRUCTION, DRIVEWAY REPLACEMENT, CURBING, SIDEWALKS, TREES, STREET LIGHTING, MASONRY PLANTERS, AND BENCHES AS WELL AS INCIDENTAL WORK.

EXISTING UTILITIES: EXISTING BURIED UTILITIES SHOWN IN THE PLAN AND PROFILE ARE SHOWN IN ACCORDANCE WITH THE AVAILABLE RECORDS AND FIELD INFORMATION AVAILABLE TO THE ENGINEER. OTHER UTILITIES MAY ALSO BE PRESENT. IT IS ANTICIPATED THAT NUMEROUS BURIED UTILITY LINES ARE LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND COORDINATING WITH THE OWNERS OF THE EXISTING UTILITIES TO DETERMINE THE LOCATION OF THEIR BURIED FACILITIES. THE CONTRACTOR SHALL LOCATE IN PLAN AND ELEVATION ALL UTILITIES WHICH MAY IMPACT THE PROJECT WORK SUFFICIENTLY IN ADVANCE OF CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF REVISIONS TO THE PROPOSED WORK ARE NEEDED AND TO PROVIDE TIME FOR THE UTILITY OWNERS TO RELOCATE THEIR FACILITIES. DELAY OF CONSTRUCTION CLAIMS WILL NOT BE APPROVED WHICH RESULT FROM FAILURE TO PROPERLY IDENTIFY UTILITIES IN PLAN AND ELEVATIONS SUFFICIENTLY IN ADVANCE OF CONSTRUCTION ACTIVITIES.

BYPASS PUMPING AND FLOW CONTROL: THE CONTRACTOR SHALL MAKE PROVISIONS TO MAINTAIN FLOWS IN ALL SANITARY AND STORM SEWERS OR CULVERTS AT ALL TIMES INCLUDING WET WEATHER CONDITIONS. BYPASS PUMPING OR OTHER FLOW CONTROLS ARE EXPECTED TO BE REQUIRED AT CERTAIN TIMES AND ARE TO BE ANTICIPATED IN THE CONTRACTORS COSTS. CITY WILL NOT BE LIABLE FOR ANY COSTS OR DAMAGES INCURRED, OR FINES IMPOSED, FOR FAILURE TO PROVIDE ADEQUATE BYPASS PUMPING OR FLOW CONTROL.

MAINTENANCE OF TRAFFIC (VEHICULAR AND PEDESTRIAN): CONTINUOUS MAINTENANCE OF ACCESS TO BUSINESS AND RESIDENCES SHALL BE PROVIDED ALONG WITH PROTECTION OF THE PUBLIC FROM CONSTRUCTION ACTIVITIES AT ALL TIMES. THE DRAWINGS IDENTIFY THE MINIMUM VEHICULAR TRAFFIC MAINTENANCE REQUIREMENTS INCLUDING THE ESTABLISHMENT OF DETOUR ROUTES. PEDESTRIAN ACCESS TO ALL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AND MAY INCLUDE THE NEED TO DEVELOP TEMPORARY WALKWAYS OVER EXCAVATIONS TO THE ENTRANCES OF BUILDINGS WHEN ALTERNATE ACCESS POINTS ARE NOT AVAILABLE. IN ISOLATED INSTANCES, ACCESS MAY BE TEMPORARILY INTERRUPTED ONLY WITH THE CONSENT OF THE CITY AND PROPERTY OWNER. SUCH TEMPORARY INTERRUPTIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS AND SHALL NOT EXCEED 24 HOURS DURATION. CONSTRUCTION AT 2ND STREET WILL REQUIRE THE REMOVAL OF TRAFFIC SIGNAL WIRING AND TRAFFIC SIGNAL MASTARMS. THE CONTRACTOR SHALL REMOVE/REVISE EXISTING SIGNALS, OR PROVIDE TEMPORARY SIGNALS, POLES, CONTROLLERS, AND WIRING AS REQUIRED FOR SIGNALIZED TRAFFIC CONTROL DURING CONSTRUCTION, AND CONSTRUCT NEW SIGNALS, WIRING AND MASTARMS AS SHOWN WHEN CONSTRUCTION ALLOWS THEM TO BE INSTALLED.

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF BLOOMINGTON. BY ENTERING INTO A CONTRACT TO PERFORM WORK ON THIS PROJECT, THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE REQUIRED TO COMPLY WITH THE SWPPP AND PROPERLY OPERATE, INSPECT AND MAINTAIN THE FEATURES TO MAINTAIN COMPLIANCE WITH THE SWPPP AND THE STATE AND LOCAL STORMWATER PERMITS. CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DEFICIENCIES NOTED BY AUTHORITIES AT HIS COST IN ORDER TO MAINTAIN COMPLIANCE WITH THE SWPPP AND REQUIRED PERMITS.

EXISTING SIGNS: CONTRACTOR IS TO CONTACT CITY TRAFFIC DIVISION (DEREK NEFF AT 812-349-3452) TO HAVE ALL CITY OWNED SIGNS REMOVED AFTER CONTRACTOR INSTALLS CONSTRUCTION SIGNS BUT PRIOR TO DEMOLITION WORK COMMENCING. CITY WILL REINSTALL PERMANENT TRAFFIC CONTROL SIGNS WHEN CONSTRUCTION IS COMPLETE. CONTRACTOR TO COORDINATE WITH CITY FOR LOCATION OF PERMANENT SIGNS AND INSTALL 4" PVC SLEEVE INSERT IN SIDEWALKS AT ALL PROPOSED SIGN LOCATIONS. ALL OTHER SIGNS OWNED BY PROPERTY OWNERS WHICH ARE LOCATED IN RIGHT OF WAY OR EASEMENT AREAS ARE TO BE REMOVED BY THE CONTRACTOR AS REQUIRED, CAREFULLY STORED AND REINSTALLED WHEN CONSTRUCTION IS COMPLETE. IF INSTALLATION IN THE EXISTING LOCATION IS NOT POSSIBLE, COORDINATE WITH CITY AND PROPERTY OWNER FOR LOCATION OF REINSTALLED SIGN.

EXISTING DUKE ENERGY POLES: EXISTING STREET LIGHTING POLES ARE OWNED BY DUKE ENERGY AND WILL BE REMOVED BY DUKE AT NO COST TO THE CONTRACTOR. EXISTING POWER POLES ALONG SMITH AVE SUPPORT POWER, TELEPHONE, AND FIBER OPTIC LINES. ONLY THE POLE LOCATED APPROXIMATELY 90 FT WEST OF THE WALNUT STREET CENTERLINE WILL BE TEMPORARILY RELOCATED 7 FT TO THE SOUTH OF ITS CURRENT POSITION DURING CONSTRUCTION. THAT POLE WILL CONTINUE TO SUPPORT THE EXISTING POWER, TELEPHONE AND FIBER OPTIC LINES ALONG SMITH AVE IN THEIR EXISTING POSITION DURING CONSTRUCTION. EXISTING POWER POLES LOCATED AT THE SE CORNER OF WALNUT AND SMITH, AND APPROXIMATELY 180 FT WEST OF THE WALNUT CENTERLINE WILL NOT BE MOVED AND MUST NOT BE DAMAGED OR ENDANGERED BY CONSTRUCTION ACTIVITIES.

TEMPORARY BUSINESS ACCESS SIGNS: ANY BUSINESS WHICH HAS ITS DRIVEWAY OR OTHER NORMAL ACCESS DISTURBED OR IF THE EXISTING BUSINESS SIGN IS TEMPORARILY REMOVED SHALL HAVE TEMPORARY BUSINESS SIGNAGE INSTALLED TO ASSIST THE PUBLIC WITH LOCATING THE BUSINESS AND ACCESS TO IT. THE SIGN SHALL BE OF STANDARD MATERIALS, UNLIGHTED AND MOUNTED ON TYPICAL CONSTRUCTION SIGN STANDARDS. LETTERS FOR BUSINESS NAMES SHALL BE A MINIMUM OF 6" IN HEIGHT AND BE EASILY VISIBLE FROM PASSING VEHICLES AND PEDESTRIANS. THE MAXIMUM SIZE OF SIGN FOR A SINGLE BUSINESS SHALL BE 10 SQ FT IN AREA. ONLY THE BUSINESS NAME SHALL BE PERMITTED ON THE SIGN AND NO ADVERTISING WILL BE PERMITTED ON THE SIGN.

OWNER PROVIDED MATERIALS: THE OWNER WILL PROVIDE THE FOLLOWING ITEMS TO THE CONTRACTOR. THE CONTRACTOR SHALL MOUNT AND INSTALL THEM IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS:

- BENCHES-VICTOR STANLEY MODEL CR-196 WITH FORMED VERTICAL STEEL SCROLLS
- STREET LIGHT LUMINARIES-STERNBERG LIGHTING MODEL A850SRLED-4ARC45T3 66 WATT LIGHT WITH FITTER 5P
- STREET LIGHT POLES-STERNBERG ORNAMENTAL POLE 5200 BARRINGTON SERIES 5214TFP6 WITH BLACK FINISH 14 FT HIGH
- TREE GRATES-URBAN ACCESSORIES CHINOOK 5' X 5' WITH -S FRAME AND BLACK POWDER COAT
- BICYCLE LOOPS-WABASH VALLEY MODEL BL 100N (IN GROUND MOUNT)
- TRASH RECEPTACLES-BIG BELLY SOLAR COMPACTOR/RECYCLE UNIT

NEW TREES: TREES TO BE PLANTED FOR THE PROJECT SHALL BE MINIMUM OF 1.75" CALIPER MEASURED AT 54" ABOVE GRADE. TREE SPECIES TO USE INCLUDE:

- RED BARRON CRABAPPLE
- PRAIRIE FIRE CRABAPPLE
- PROFESSOR SPRINGER CRABAPPLE
- WINTERKING HAWTHORN (THORNLESS)
- SERVICEBERRY

USE OF INDOT STANDARD SPECIFICATIONS: MATERIALS AND WORKMANSHIP FOR THE FOLLOWING WORK SHALL BE AS REQUIRED IN THE 2010 INDOT STANDARD SPECIFICATIONS UNLESS SUPERCEDED BY SPECIAL CONDITIONS OR THESE DRAWINGS:

- BITUMINOUS PAVING SECTION 402
- CONCRETE PAVING SECTION 502
- CONCRETE CURBS SECTION 605
- CONCRETE SIDEWALKS SECTION 604
- CAST IN PLACE CONCRETE SECTION 702
- STEEL REINFORCEMENT SECTION 703
- PAVEMENT MARKINGS SECTION 808
- SEEDING AND SODDING SECTION 621
- PLANTING TREES AND SHRUBS SECTION 622
- EROSION CONTROLS SECTION 205
- TRAFFIC SIGNALS, WIRING AND EQUIPMENT SECTION 805

EXISTING UTILITY SERVICES: THE PROPOSED WORK CROSSES NUMEROUS EXISTING UTILITY LINES. ALL EXISTING UTILITY SERVICES SHALL REMAIN IN OPERATION DURING CONSTRUCTION UNLESS ALTERNATE SERVICE IS PROVIDED OR UNTIL NEW REPLACEMENT SERVICES ARE INSTALLED AND READY TO BE PLACED INTO OPERATION. WORK INCLUDED IN THIS PROJECT IS EXPECTED TO REQUIRE RELOCATION OF NUMEROUS SERVICE LINES.

WATER AND SANITARY SEWER SERVICES: ALL ACTIVE WATER AND SANITARY SEWER SERVICE LINES ENCOUNTERED ARE TO BE REPLACED AS PART OF THE PROJECT WHERE SHOWN ON THE PLANS OR WHERE ENCOUNTERED IF DIFFERENT THAN SHOWN. CONTRACTOR SHALL CONFORM TO THE UTILITY DEPARTMENT STANDARDS FOR NEW CONSTRUCTION WITH THE REPLACEMENT SERVICE LINES. CONTRACTOR SHALL INSTALL ALL REQUIRED SERVICE CONNECTIONS ON REPLACEMENT WATERMAINS AND SANITARY SEWERS AND INSTALL ALL SERVICE LINES TO THE BUILDING FACE OR RIGHT OF WAY LINE AS APPROPRIATE. REPLACEMENT SANITARY SERVICE LINES SHALL BE OF THE SAME SIZE AS THE EXISTING SERVICE WITH A MINIMUM OF 6" DIAMETER. REFER TO CBU STANDARD SPECIFICATIONS DETAIL 19 FOR MINIMUM CONSTRUCTION REQUIREMENTS. IN ADDITION THE TOP OF THE CLEANOUT SHALL BE NO MORE THAN 3" BELOW THE TOP OF CASTING AND THE LOCATING WIRE SHALL BE BROUGHT UP TO THE SURFACE INSIDE THE CLEANOUT CASTING. THE LOCATING WIRE SHALL BE #10 INSULATED SOLID COPPER WIRE WRAPPED AROUND THE LATERAL AT LEAST ONCE FOR EVERY PIPE JOINT BETWEEN THE MAIN AND THE CLEANOUT. ALL WATER SERVICE LINES SHALL BE OF THE SAME SIZE AS THE EXISTING SERVICE WITH A MINIMUM 2" SERVICE LINE, AND SHALL INCLUDE A METER SETTER AND METER BOX. WATER METERS WILL BE INSTALLED BY CITY.

STORM DRAINS: CONTRACTOR SHALL RECONNECT ALL ACTIVE EXISTING PIPES WHICH ARE FOUND TO BE DRAINING INTO THE EXISTING CULVERT OR OPEN DITCH WITH MATERIALS CONFORMING TO UTILITY DEPARTMENT STANDARDS AND COMPATIBLE WITH THE EXISTING DRAINS AND NEW CULVERTS OR STORM SEWERS. PIPE JOINTS TO THE EXISTING DRAINS SHALL BE MADE OUTSIDE OF THE NEW CULVERT OR STORM SEWERS AND MAY REQUIRE "CUSTOM" CONNECTIONS DUE TO THE CONDITION OF THE EXISTING DRAINS. MANY SMALL DRAINS ARE KNOWN TO EXIST ALONG THE EXISTING CULVERT AND OPEN DITCH BUT ARE GENERALLY NOT SHOWN ON THE DRAWINGS.

GAS, ELECTRIC, AND OTHER BURIED UTILITIES: CONTRACTOR SHALL COORDINATE WITH OTHER UTILITY COMPANIES TO MAINTAIN SERVICE AND RELOCATE SERVICES AS REQUIRED. SERVICE RELOCATIONS BY OTHER UTILITIES WITHIN CITY RIGHT OF WAY SHALL BE AT THE PRIVATE UTILITY COST.

USE OF RIGHT OF WAY AND EASEMENTS: CONTRACTOR IS ALLOWED TO USE ALL RIGHT OF WAY AREAS SHOWN ON THE PLANS FOR HIS WORK, ALONG WITH AREAS IDENTIFIED AS PROPOSED PERMANENT EASEMENT, EXISTING PERMANENT EASEMENT, PRESCRIPTIVE EASEMENT, AND PROPOSED TEMPORARY EASEMENT. NO MATERIALS OR EQUIPMENT SHALL BE STORED OR WORK ACTIVITIES OCCUR IN A LOCATION OR MANNER WHICH PRESENTS A HAZARD TO THE PUBLIC OR ENVIRONMENT EVEN IF CONTAINED WITHIN THE ALLOWABLE WORK AREAS. THE SAFEGUARD OF MATERIALS AND EQUIPMENT REMAINING IN ALLOWABLE WORK AREAS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IF ADDITIONAL AREAS ARE REQUIRED BY THE CONTRACTOR BEYOND THOSE INDICATED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, NEGOTIATING AND PAYING FOR SUCH AREAS AT NO ADDITIONAL COST TO THE CITY. CONTRACTOR SHALL STAKE ALL EASEMENTS AND ADDITIONAL WORK AREAS OBTAINED PRIOR TO COMMENCING WORK TO IDENTIFY THE LIMITS OF WORK.

COORDINATION OF DRAWINGS, SPECIAL CONDITIONS, CONSTRUCTION SPECIFICATIONS AND STANDARD SPECIFICATIONS: THE CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLEMENTARY AND TO DESCRIBE AND PROVIDE FOR A COMPLETE WORK. A REQUIREMENT IN ONE IS BINDING AS THOUGH OCCURRING IN ALL. THE CONTRACT DOCUMENTS INCLUDED FOR THIS WORK AND THE ORDER OF PRECEDENCE ARE AS FOLLOWS:

1. PROJECT AGREEMENT
2. DOCUMENTS APPEARING IN THE PROJECT MANUAL INCLUDING SPECIAL CONDITIONS
3. PROJECT DRAWINGS
4. CONSTRUCTION SPECIFICATIONS FOR CITY OF BLOOMINGTON UTILITIES DATED JANUARY 1, 2011. (COPIES OF CURRENT CBU SPECIFICATIONS ARE AVAILABLE ON THE WEB AT WWW.BLOOMINGTON.IN.GOV/UTILITIES UNDER THE CATEGORY "FOR CONTRACTORS".
5. INDOT STANDARD SPECIFICATIONS FOR 2010
6. INDOT STANDARD DRAWINGS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	001GA1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

GENERAL LEGEND

DONOHUE & ASSOCIATES

Sheet No. 2

Drawing No. **G-1**

ABBREVIATIONS

AGG – AGGREGATE
B/C – BACK OF CURB
BIT – BITUMINOUS/ASPHALT
CIP – CAST IRON PIPE
CO – CLEANOUT
CONC – CONCRETE
CMP – CORRUGATED METAL PIPE
CSP – CONCRETE SEWER PIPE
DIA – DIAMETER
DIP – DUCTILE IRON PIPE
EXTG – EXISTING
EOP – EDGE OF PAVEMENT
F&C – FRAME AND COVER
F/C – FACE OF CURB
F–F – FACE TO FACE
F/G – FINISHED GRADE
FES – FLARED END SECTION
INV – INVERT
L – LENGTH OF CURVE
LF – LINEAR FT
LT – LEFT
NG – NATURAL GAS
OH – OVERHEAD UTILITY
PC – POINT OF CURVATURE
PE – POLYETHYLENE PIPE
PI – POINT OF INTERSECTION
PL – PROPERTY LINE
PT – POINT OF TANGENCY
PVC – POLYVINYL CHLORIDE PIPE
PVI – POINT OF VERTICAL INTERSECTION
R – RADIUS
RCP – REINFORCED CONCRETE PIPE
RIM – TOP OF CASTING ELEVATION
ROW – RIGHT OF WAY
RT – RIGHT
SAN – SANITARY SEWER
STM – STORM SEWER
SD – SUMP DISCHARGE
T/C – TOP OF CURB
T/W – TOP OF WALL
UD – UNDERDRAIN
VC – VERTICAL CURVE

LEGEND

EXISTING	PROPOSED	
		BENCHMARK
		CATCH BASIN
		CULVERT
		CULVERT OVER 24" (SHOWN ACTUAL SIZE)
		GAS VALVE
		GUY WIRE
		HAY BALES
		HEADWALL
		HYDRANT
		INLET
I.P.		IRON PIPE
		MANHOLE
		MARSH
M	M	METER
		UTILITY POLE
		UTILITY POLE WITH LIGHT
		SECTION CORNER
		SIGN
	400.00 x 400.00	SPOT ELEVATION
		SOIL BORING
		STREET LIGHT
		SURVEY CONTROL POINT
		TELEPHONE PEDESTAL
		TREE CONIFEROUS, DECIDIOUS
		TREE REMOVAL
		TREE/SHRUB LINE
		WATER VALVE

LINE TYPE IDENTIFICATION

EXISTING	PROPOSED	
CATV		CABLE TV
		CENTERLINE OF ROAD
100	100	CONTOUR
		DITCH/SWALE
		EASEMENT
X X	X X	FENCE
E	E	ELECTRIC
FO	FO	FIBER OPTIC
FM	FM	FORCEMAIN
G	G	GAS
		GUARDRAIL
OH		OVERHEAD ELECTRIC
		PIPE, ABANDON
O O		PIPE, PREVIOUSLY ABANDONED
	X X X X X X	PIPE, REMOVE
		PIPE OVER 24" (SHOWN ACTUAL SIZE)
		PROPERTY LINE
		R.O.W.
		RAILROAD
SAN	SAN	SANITARY SEWER
		SILT FENCE
STM	STM	STORM SEWER
T		TELEPHONE
W	W	WATER
		WATERS EDGE
WET		WETLAND

EASEMENT LEGEND

- PROPOSED PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- EXISTING EASEMENT RETURNED TO OWNER
- EXISTING TUNNELS

NOTE:

THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS NEEDED IN THESE CONTRACT DRAWINGS.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KHC
Drawn By	HFF
Checked By	KHC
Approved By	PNE
Filename	001GA1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CIVIL LEGEND

DONOHUE & ASSOCIATES

Sheet No. 3

Drawing No. **G-2**

0 50'

DRAWINGS R1, P1, P7, SR1, PJ1

DRAWINGS R6, P6, SR6

DRAWINGS R4, P4, P10, SR4

CONTRACT A-B BREAKLINE

DRAWINGS R2, P2, P8, SR2, PJ2

DRAWINGS R3, P3, P9, SR3, PJ3

DRAWINGS R5, P5, P11, SR5

DRAWING P12

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KHC
Drawn By	HFF
Checked By	KHC
Approved By	PNE
Filename	002GC1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING
REGISTERED
NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

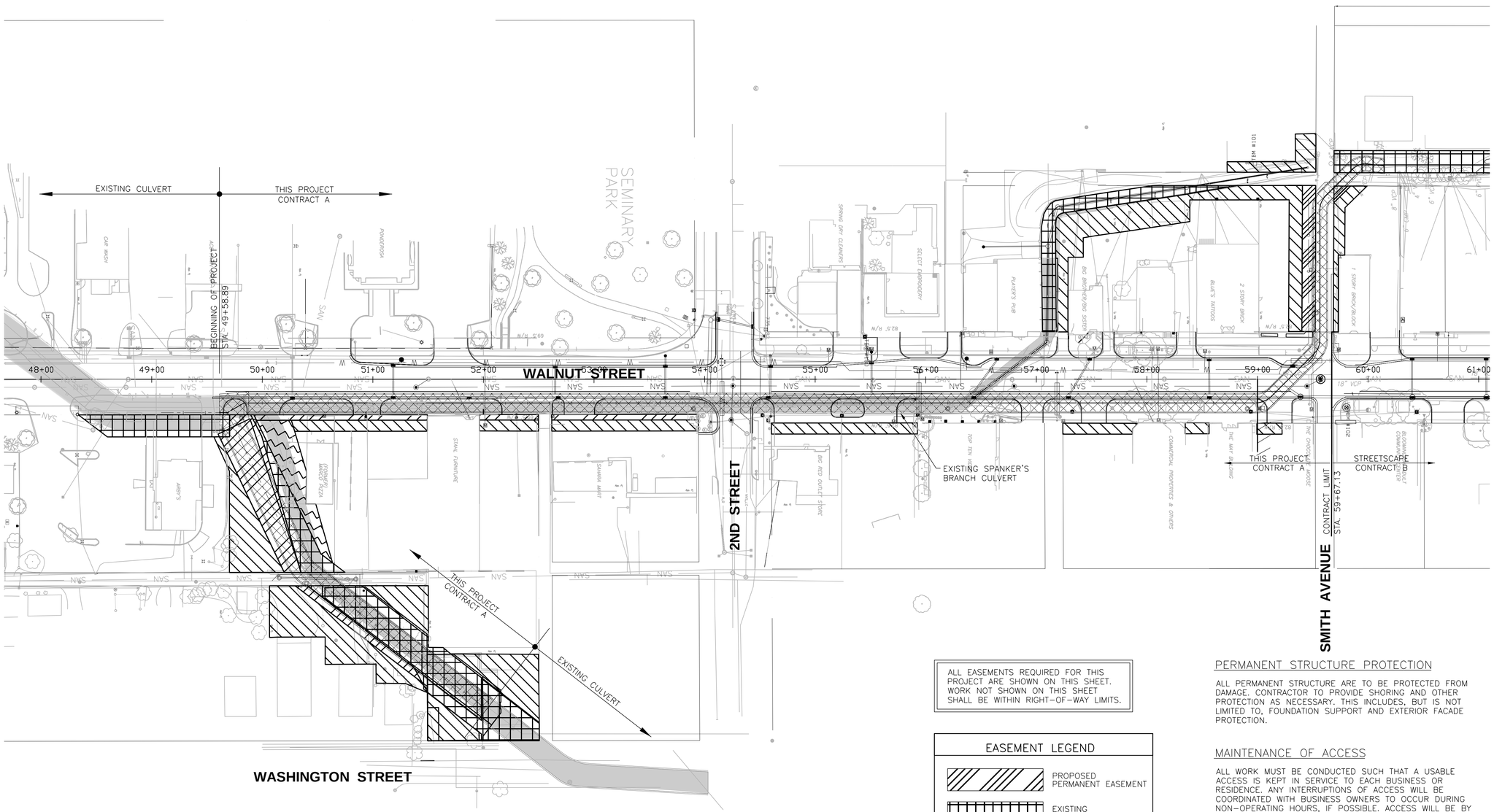
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SHEET LAYOUT OVERVIEW

DONOHUE & ASSOCIATES

Sheet No. 4

Drawing No. **G-3**



ALL EASEMENTS REQUIRED FOR THIS PROJECT ARE SHOWN ON THIS SHEET. WORK NOT SHOWN ON THIS SHEET SHALL BE WITHIN RIGHT-OF-WAY LIMITS.

EASEMENT LEGEND

- PROPOSED PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- PROPOSED TEMPORARY EASEMENT
- EXISTING EASEMENT RETURNED TO PROPERTY OWNER
- EXISTING TUNNELS

PERMANENT STRUCTURE PROTECTION

ALL PERMANENT STRUCTURE ARE TO BE PROTECTED FROM DAMAGE. CONTRACTOR TO PROVIDE SHORING AND OTHER PROTECTION AS NECESSARY. THIS INCLUDES, BUT IS NOT LIMITED TO, FOUNDATION SUPPORT AND EXTERIOR FACADE PROTECTION.

MAINTENANCE OF ACCESS

ALL WORK MUST BE CONDUCTED SUCH THAT A USABLE ACCESS IS KEPT IN SERVICE TO EACH BUSINESS OR RESIDENCE. ANY INTERRUPTIONS OF ACCESS WILL BE COORDINATED WITH BUSINESS OWNERS TO OCCUR DURING NON-OPERATING HOURS, IF POSSIBLE. ACCESS WILL BE BY TEMPORARY SIDEWALKS OR RAILED WALKWAYS IF NECESSARY, IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL CODES.

EASEMENT DOCUMENTS

EASEMENTS SHOWN ON THIS DRAWING ARE A COMPILATION OF THE EASEMENTS ANTICIPATED TO BE GRANTED BY THE VARIOUS PROPERTY OWNERS. CONTRACTOR SHALL REFER TO THE RECORDED EASEMENT DOCUMENTS AVAILABLE FROM THE OWNER FOR EXACT DIMENSIONS, AND LIMITS OF EASEMENTS ACQUIRED FOR THIS PROJECT AND FOR ANY SPECIAL CONSIDERATIONS AND REQUIREMENTS INCLUDED WITH THE EASEMENTS AS A CONDITION OF THE EASEMENT GRANT.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KHC
Drawn By	HFF
Checked By	TJM
Approved By	PNE
Filename	246E1-L1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING
REGISTERED
NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

EASEMENT AND PROPERTY USE PLAN

DONOHUE & ASSOCIATES

Sheet No. 5

Drawing No. E1

GENERAL NOTES:

1) ALIGNMENT "A–1" IS LOCATED DOWN THE CENTER OF THE TWO 11' VEHICULAR TRAVEL LANES FROM THE BEGINNING TO THE END OR THE PROJECT.

2) FROM THE START OF THE PROJECT TO 2ND STREET, ALIGNMENT "A–1" IS 2.75' EAST OF THE 69.5 FT RIGHT–OF–WAY CENTERLINE.

3) FROM 2ND STREET TO SMITH AVENUE, ALIGNMENT "A–1" IS 1.58' EAST OF THE 82.5 FT RIGHT–OF–WAY CENTERLINE.

0 50'

TBM #1
N: 1424944.11
E: 3108585.50
ELEV. 731.08
NORTHEAST CORNER OF LIGHT BASE, SOUTHWEST CORNER OF 1ST AND WALNUT STREETS
BM MAY HAVE BEEN DISTURBED

ALIGNMENT "A–1" STATIONING MATCHES THE PROPOSED CULVERT CENTERLINE "S–1" STATIONING BETWEEN STATION 49+83.43 AND 58+97.47

PI STA. 46+98.17 "A–1"
N = 1424973.71
E = 3108613.87

POB STA.4+00.00 "J–1"
N: 1425184.18
E: 3108644.34

PI STA.49+66.18 "S–1"
= PI STA.4+59.91 "J–1"
N = 1425244.10
E = 3108644.07

PI STA.49+83.43 "S–1"
N = 1425258.98
E = 3108635.34

TBM #2
TOP OF EAST SUPPORT FLANGE OF EAST SIDE OF PONDEROSA SIGN
N = 1425382..51
E = 3108573.73
ELEV. = 734.24

COUNTY BM#3
RR SPK IN LT. POLE #763–179
60M± SOUTH OF SECOND STREET, WESTSIDE WALNUT STREET
N = 1425483.76
E = 3108586.51
ELEV. = 734.91

TBM #3
N: 1425730.87
E: 3108568.86
ELEV. 735.82
TOP SOUTHWEST BOLT AREA LIGHT, NORTHWEST CORNER OF 2ND AND WALNUT STREETS

TBM #101
NORTHEAST CORNER OF CONCRETE STOOP 65'± SOUTH CENTERLINE OF SMITH AVE. 5'± WEST OF WEST WALL OF SPANKERS BRANCH 1' ABOVE GROUND (BACK OF OCEAN MIDWEST MORT.)
N = 1426173.20
E = 3108418.59
ELEV. = 743.37

TBM #100
MAG NAIL SET ON EAST SIDE OF CONCRETE LIGHT POLE AT END OF WALL 125'± OF CENTER LINE OF 2ND STREET 35' WEST OF CENTERLINE OF WALNUT STREET
N = 1425820.42
E = 3108575.72
ELEV. = 736.28

PI STA. 58+53.78 "S"
N = 1425994.89
E = 3108458.01

PI STA. 61+78.95 "S–1"
N = 1426290.47
E = 3108421.02

PI STA. 61+62.49 "S–1"
N = 1426274.14
E = 3108418.92

PT STA. 61+48.24 "S–1"
N = 1426261.35
E = 3108424.12

PC STA. 61+31.19 "S–1"
N = 1426231.93
E = 3108429.69

PT STA. 59+97.47 "S–1"
N = 1426231.93
E = 3108578.50

PC STA. 59+69.02 "S–1"
N = 1426226.95
E = 3108590.52

PT STA. 59+14.75 "S–1"
N = 1426188.58
E = 3108628.90

PI STA. 57+27.91 "S"
N = 1425985.13
E = 3108580.51

PI STA. 54+32.56 "A–1"
N = 1425708.11
E = 3108613.87

PC STA. 58+97.47 "S–1"
N = 1426173.02
E = 3108635.34

PI STA. 60+13.34 "S–1"
N = 1426236.58
E = 3108448.71

PI STA. 60+00.61 "S–1"
N = 1426251.93
E = 3108460.27

PI STA. 59+67.13 "A–1"
N = 1426242.67
E = 3108613.87

SMITH AVENUE

WALNUT STREET

2ND STREET

FIRST STREET

48+00 49+00 50+00 51+00 52+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00

32 FT 37.50 FT 21.48 FT

ALIGNMENT DIMENSION OFF OF WEST ROW LINE

ALIGNMENT DIMENSION OFF OF EAST ROW LINE

ALIGNMENT "A–1" IS 21.48 FT WEST OF ALIGNMENT "S–1"

COUNTY BM#2
RR SPK IN LT. POLE #763–184
30M± SOUTH OF FIRST STREET, WESTSIDE WALNUT ST
N = 1424858.51
E = 3108590.30
ELEV. = 730.75

POB STA.49+58.89 "S–1"
= PI STA.4+52.63 "J–1"
N = 1425236.81
E = 3108644.07

PI STA.4+71.76 "J–1"
N = 1425249.21
E = 3108654.76

PC STA. 6+09.73 "J–1"
N = 1425308.71
E = 3108779.24

PT STA. 6+23.00 "J–1"
N = 1425317.01
E = 3108789.43

POE STA. 8+24.89 "J–1"
N = 1425477.60
E = 3108911.78

TBM #102
CUT "X" SOUTH BONNET BOLT TOP FLANGE FIRE HYDRANT IN NORTHEAST CORNER OF WALNUT AND SMITH 25'± EAST OF CENTERLINE OF WALNUT AND 17'± NORTH OF CENTERLINE OF SMITH AVENUE.
N = 1426255.89
E = 3108639.49
ELEV. = 742.53
BM MAY HAVE BEEN DISTURBED

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PAUL N. ELLING
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NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SITE LAYOUT AND GEOMETRICS

DONOHUE & ASSOCIATES

Sheet No. 6

Drawing No. L1

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. WATER AND SEWER SERVICE LINES WHICH ARE REPLACED WITH NEW SERVICE LINES ARE TO BE ABANDONED/REMOVED AS REQUIRED. PLUG ENDS OF SERVICE LINES ABANDONED IN PLACE. REMOVE ABANDONED METER PITS AND METERS.
3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT ENTRANCE

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE REMOVED BY DUKE
- M3 REMOVE/REPLACE EXISTING SIGN

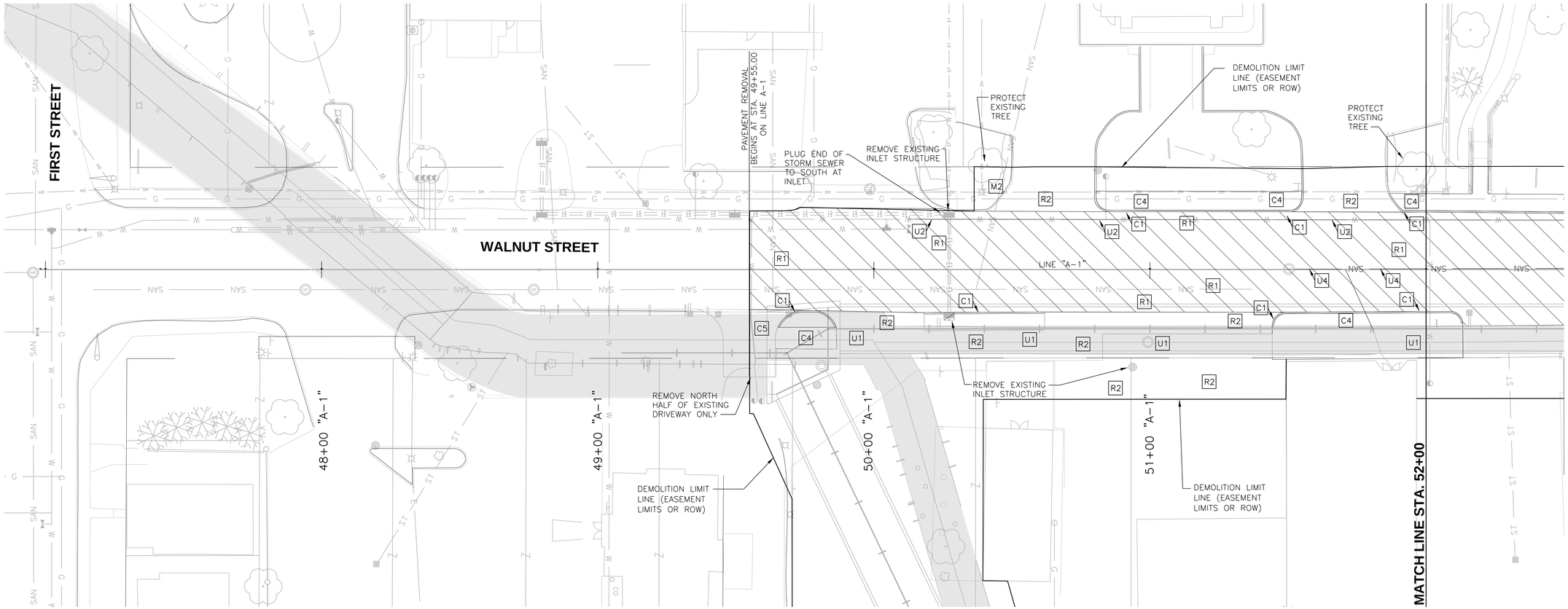
PAVEMENT REMOVALS

- R1 6.5" AVG BITUMINOUS OVER 7.5" AVG CONCRETE PAVEMENT
- R2 REMOVE BITUMINOUS DRIVEWAY/PARKING LOT TO EASEMENT OR RIGHT OF WAY LINE

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED

0 20'



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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 7

Drawing No. **R1**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. WATER AND SEWER SERVICE LINES WHICH ARE REPLACED WITH NEW SERVICE LINES ARE TO BE ABANDONED/REMOVED AS REQUIRED. PLUG ENDS OF SERVICE LINES ABANDONED IN PLACE. REMOVE ABANDONED METER PITS AND METERS.
3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT ENTRANCE

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE REMOVED BY DUKE
- M3 REMOVE/REPLACE EXISTING SIGN

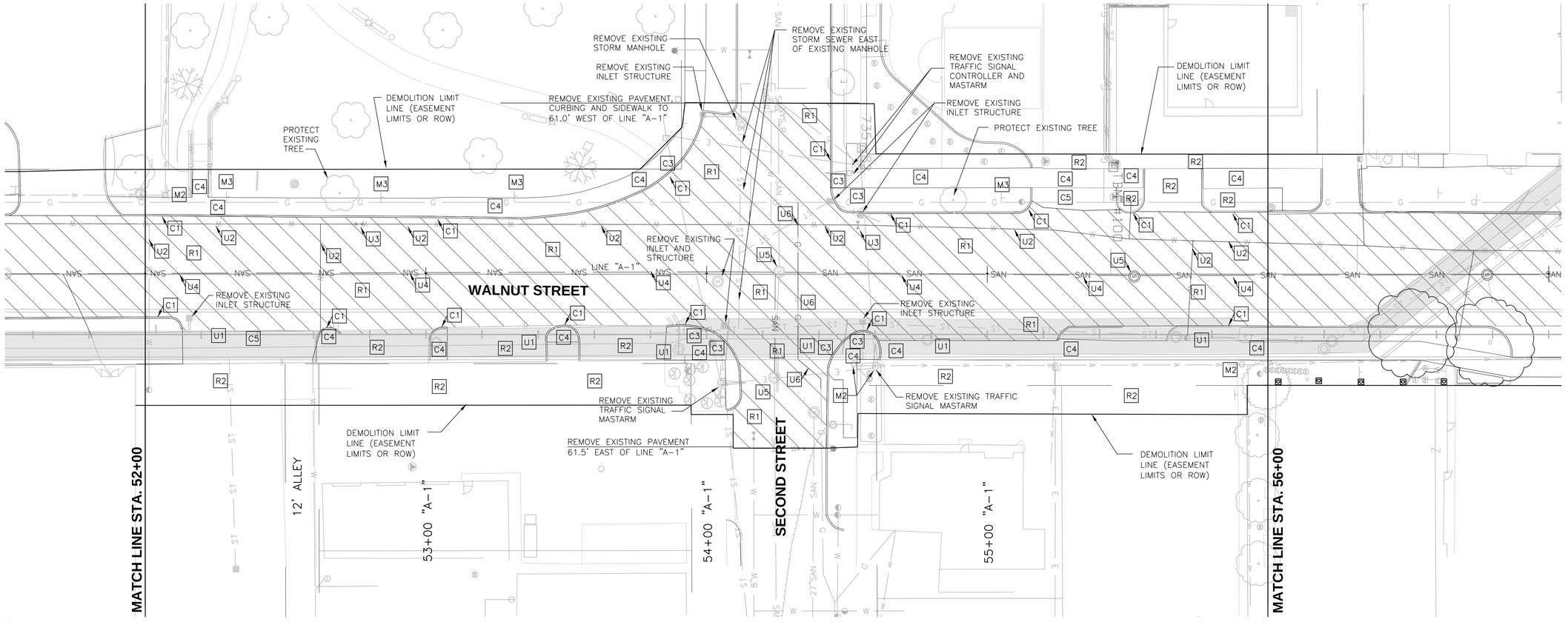
PAVEMENT REMOVALS

- R1 6.5" AVG BITUMINOUS OVER 7.5" AVG CONCRETE PAVEMENT
- R2 REMOVE BITUMINOUS DRIVEWAY/PARKING LOT TO EASEMENT OR RIGHT OF WAY LINE

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED
- U6 GAS MAIN RELOCATION

0 20'



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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 8

Drawing No. **R2**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. WATER AND SEWER SERVICE LINES WHICH ARE REPLACED WITH NEW SERVICE LINES ARE TO BE ABANDONED/REMOVED AS REQUIRED. PLUG ENDS OF SERVICE LINES ABANDONED IN PLACE. REMOVE ABANDONED METER PITS AND METERS.
3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT ENTRANCE

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE REMOVED BY DUKE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK
- M5 WOOD PLANTER

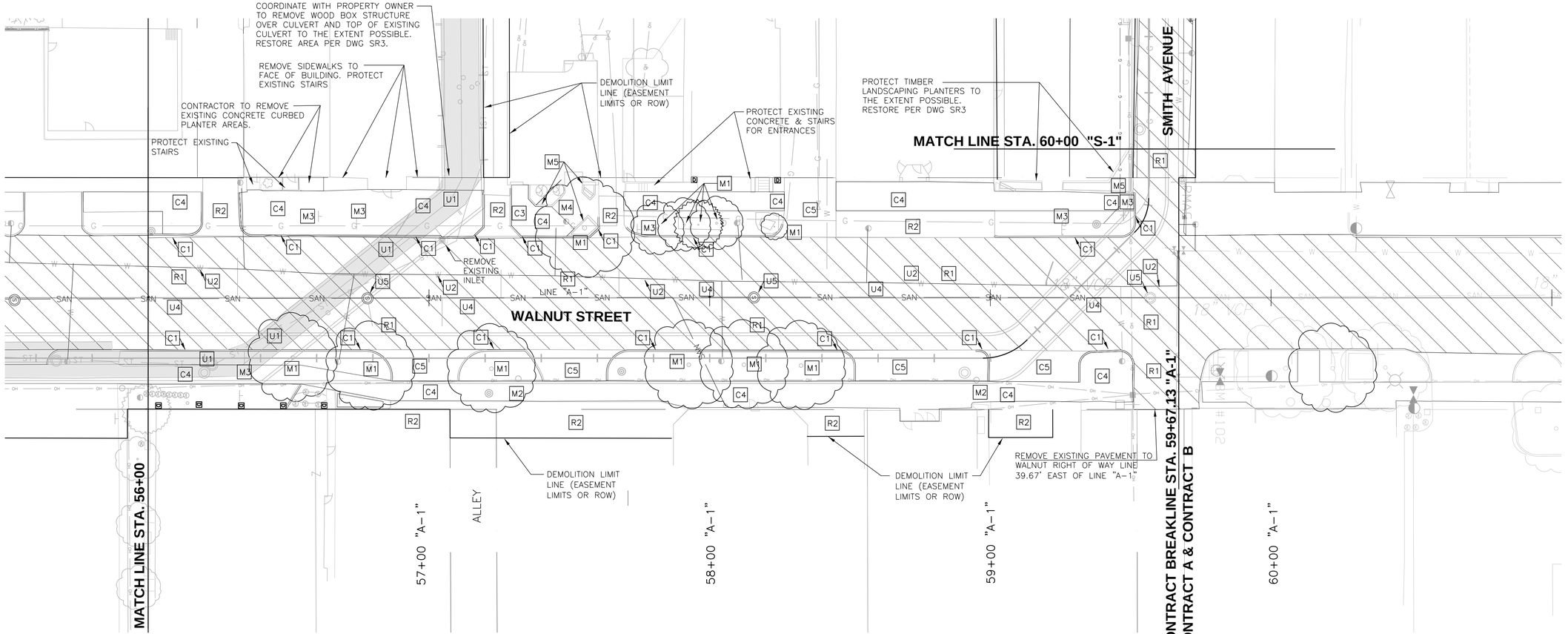
PAVEMENT REMOVALS

- R1 6.5" AVG BITUMINOUS OVER 7.5" AVG CONCRETE PAVEMENT
- R2 REMOVE BITUMINOUS DRIVEWAY/PARKING LOT TO EASEMENT OR RIGHT OF WAY LINE

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED

0 20'



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 9

Drawing No. **R3**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. WATER AND SEWER SERVICE LINES WHICH ARE REPLACED WITH NEW SERVICE LINES ARE TO BE ABANDONED/REMOVED AS REQUIRED. PLUG ENDS OF SERVICE LINES ABANDONED IN PLACE. REMOVE ABANDONED METER PITS AND METERS.
3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT ENTRANCE

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK
- M5 EXISTING FENCE
- M6 EXISTING BRIDGE
- M7 REMOVE UPPER LAYERS OF STONE ALONG CULVERT

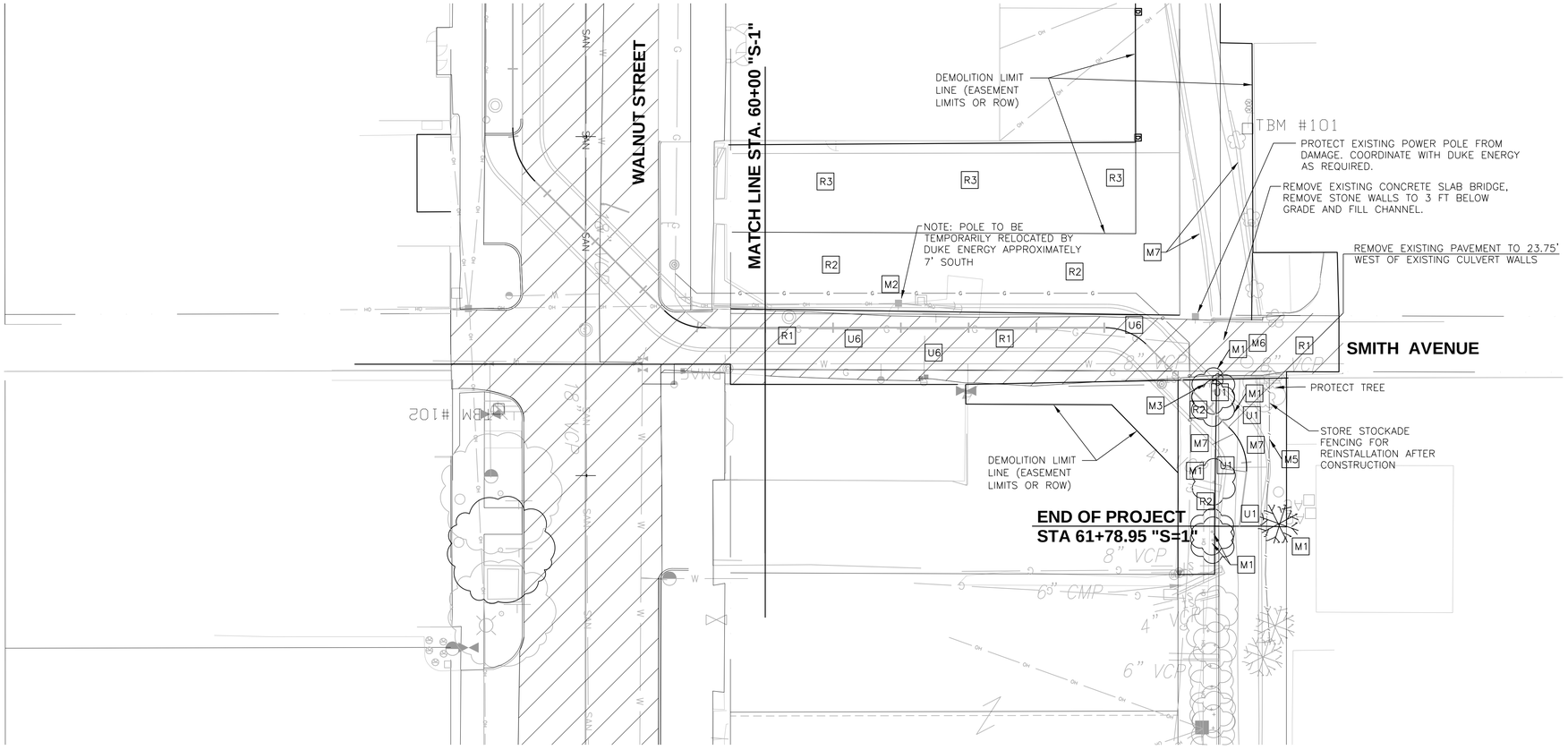
PAVEMENT REMOVALS

- R1 9-12" BITUMINOUS PAVEMENT
- R2 REMOVE BITUMINOUS DRIVEWAY/PARKING LOT TO EASEMENT OR RIGHT OF WAY LINE
- R3 MILL 1.5" OF ASPHALT PAVEMENT BETWEEN NORTH FACE OF 406 SOUTH WALNUT AND TEMPORARY EASEMENT LINE PER EASEMENT AGREEMENT

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED
- U6 GAS COMPANY TO RELOCATE GAS MAIN AS REQUIRED

0 20'



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 10

Drawing No. **R4**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. WATER AND SEWER SERVICE LINES WHICH ARE REPLACED WITH NEW SERVICE LINES ARE TO BE ABANDONED/REMOVED AS REQUIRED. PLUG ENDS OF SERVICE LINES ABANDONED IN PLACE. REMOVE ABANDONED METER PITS AND METERS.
3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK
- M5 EXISTING FENCE
- M6 GRAVEL DRIVEWAY

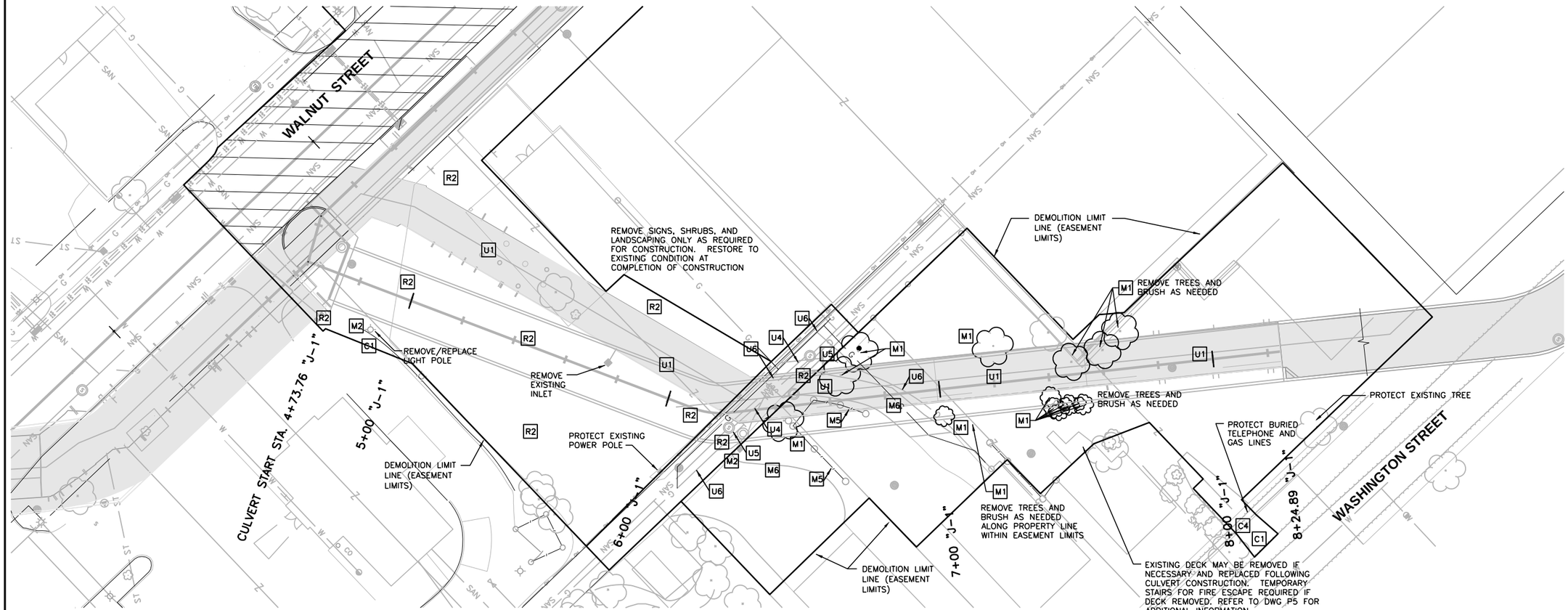
PAVEMENT REMOVALS

- R1 BITUMINOUS FULL DEPTH PAVEMENT
- R2 BITUMINOUS DRIVEWAY/PARKING LOT

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED
- U6 GAS COMPANY TO RELOCATE GAS MAIN AS REQUIRED

0 20'



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 11

Drawing No. R5

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
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3. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED.

CONCRETE REMOVALS

- C1 CONCRETE CURB AND GUTTER
- C2 CONCRETE PLANTER
- C3 CONCRETE ADA RAMP
- C4 CONCRETE 4" SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT

MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK
- M5 REMOVE UPPER LAYERS OF STONE ALONG CULVERT TO A MINIMUM OF 2 FT BELOW FINISHED GRADE

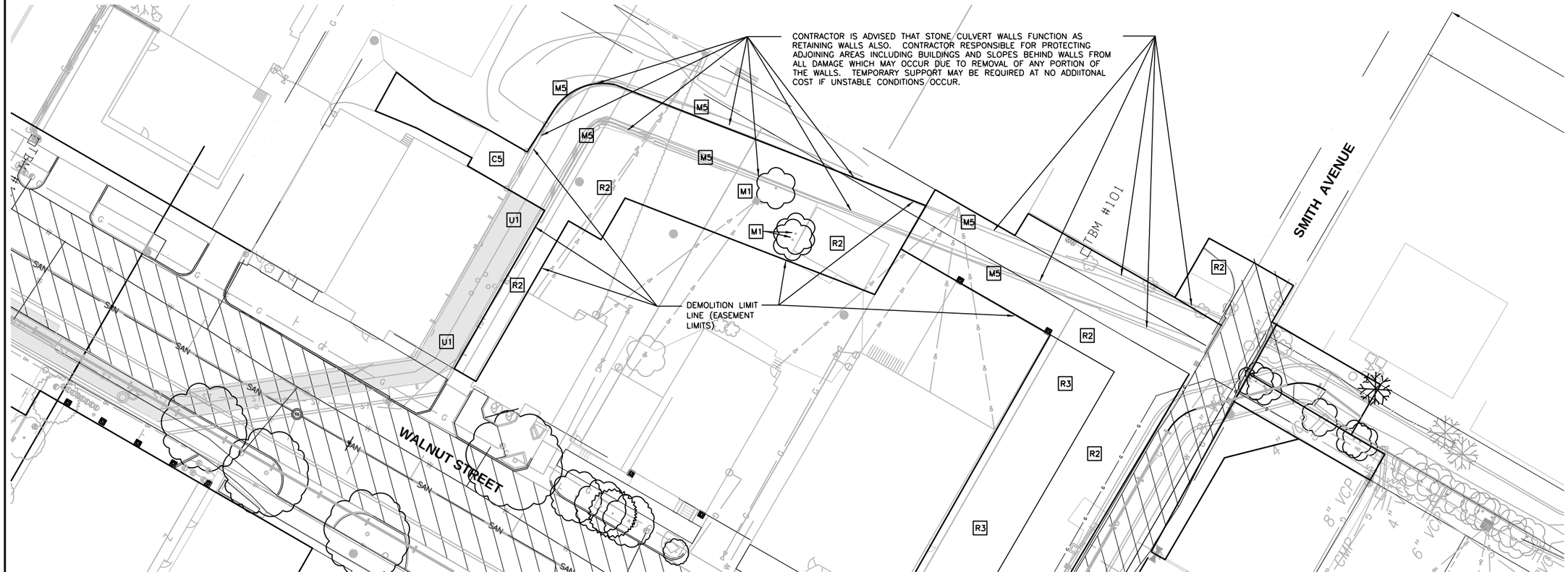
PAVEMENT REMOVALS

- R1 BITUMINOUS FULL DEPTH PAVEMENT
- R2 BITUMINOUS DRIVEWAY/PARKING LOT
- R3 MILL 1.5" ASPHALT PAVEMENT BETWEEN NORTH FACE OF 406 SOUTH WALNUT AND TEMPORARY EASEMENT LINE PER EASEMENT AGREEMENT

UTILITY REMOVALS

- U1 EXISTING CULVERT REMOVAL OR ABANDONMENT AS REQUIRED
- U2 WATERMAIN REMOVAL/ABANDONMENT AS REQUIRED
- U3 WATERMAIN STRUCTURES(VALVES, METER PITS, ETC)
- U4 SANITARY SEWER REMOVAL/ABANDONMENT AS REQUIRED
- U5 SANITARY MANHOLES REMOVAL/ABANDONMENT AS REQUIRED
- U6 GAS COMPANY TO RELOCATE GAS MAIN AS REQUIRED

0 20'



Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	246CR1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

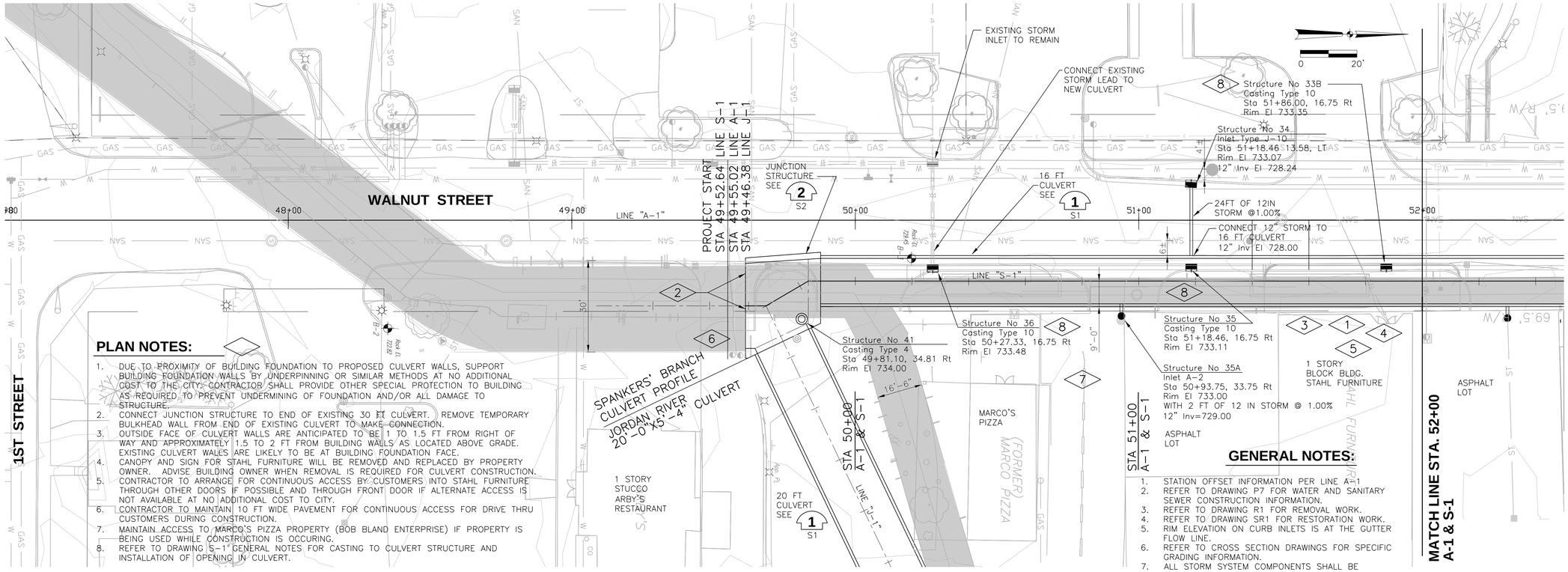
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 12

Drawing No. R6

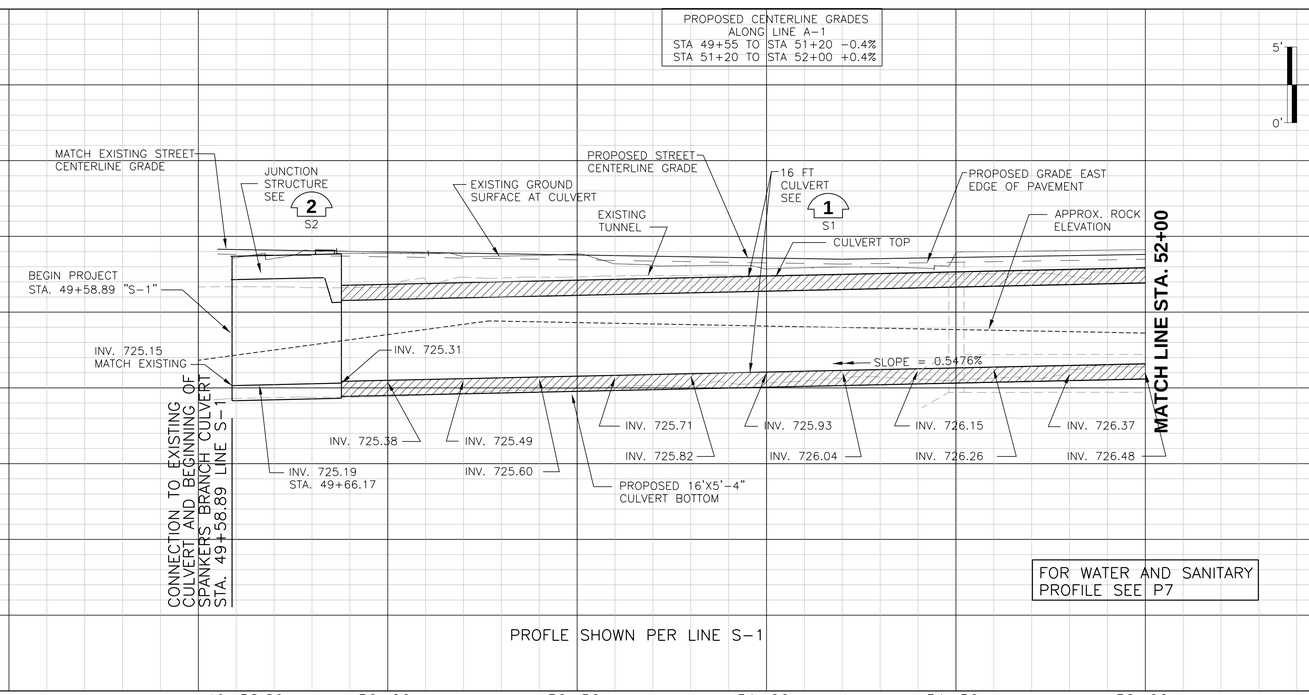


PLAN NOTES:

1. DUE TO PROXIMITY OF BUILDING FOUNDATION TO PROPOSED CULVERT WALLS, SUPPORT BUILDING FOUNDATION WALLS BY UNDERPINNING OR SIMILAR METHODS AT NO ADDITIONAL COST TO THE CITY. CONTRACTOR SHALL PROVIDE OTHER SPECIAL PROTECTION TO BUILDING AS REQUIRED TO PREVENT UNDERMINING OF FOUNDATION AND/OR ALL DAMAGE TO STRUCTURE.
2. CONNECT JUNCTION STRUCTURE TO END OF EXISTING 30 FT CULVERT. REMOVE TEMPORARY BULKHEAD WALL FROM END OF EXISTING CULVERT TO MAKE CONNECTION.
3. OUTSIDE FACE OF CULVERT WALLS ARE ANTICIPATED TO BE 1 TO 1.5 FT FROM RIGHT OF WAY AND APPROXIMATELY 1.5 TO 2 FT FROM BUILDING WALLS AS LOCATED ABOVE GRADE. EXISTING CULVERT WALLS ARE LIKELY TO BE AT BUILDING FOUNDATION FACE.
4. CANOPY AND SIGN FOR STAHL FURNITURE WILL BE REMOVED AND REPLACED BY PROPERTY OWNER. ADVISE BUILDING OWNER WHEN REMOVAL IS REQUIRED FOR CULVERT CONSTRUCTION.
5. CONTRACTOR TO ARRANGE FOR CONTINUOUS ACCESS BY CUSTOMERS INTO STAHL FURNITURE THROUGH OTHER DOORS IF POSSIBLE AND THROUGH FRONT DOOR IF ALTERNATE ACCESS IS NOT AVAILABLE AT NO ADDITIONAL COST TO CITY.
6. CONTRACTOR TO MAINTAIN 10 FT WIDE PAVEMENT FOR CONTINUOUS ACCESS FOR DRIVE THRU CUSTOMERS DURING CONSTRUCTION.
7. MAINTAIN ACCESS TO MARCO'S PIZZA PROPERTY (BOB BLAND ENTERPRISE) IF PROPERTY IS BEING USED WHILE CONSTRUCTION IS OCCURING.
8. REFER TO DRAWING S-1 GENERAL NOTES FOR CASTING TO CULVERT STRUCTURE AND INSTALLATION OF OPENING IN CULVERT.

GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A-1
2. REFER TO DRAWING P7 FOR WATER AND SANITARY SEWER CONSTRUCTION INFORMATION.
3. REFER TO DRAWING R1 FOR REMOVAL WORK.
4. REFER TO DRAWING SR1 FOR RESTORATION WORK.
5. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
6. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
7. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.



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Date | Checked By | Drawn By | Revision Description | Revision Number

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

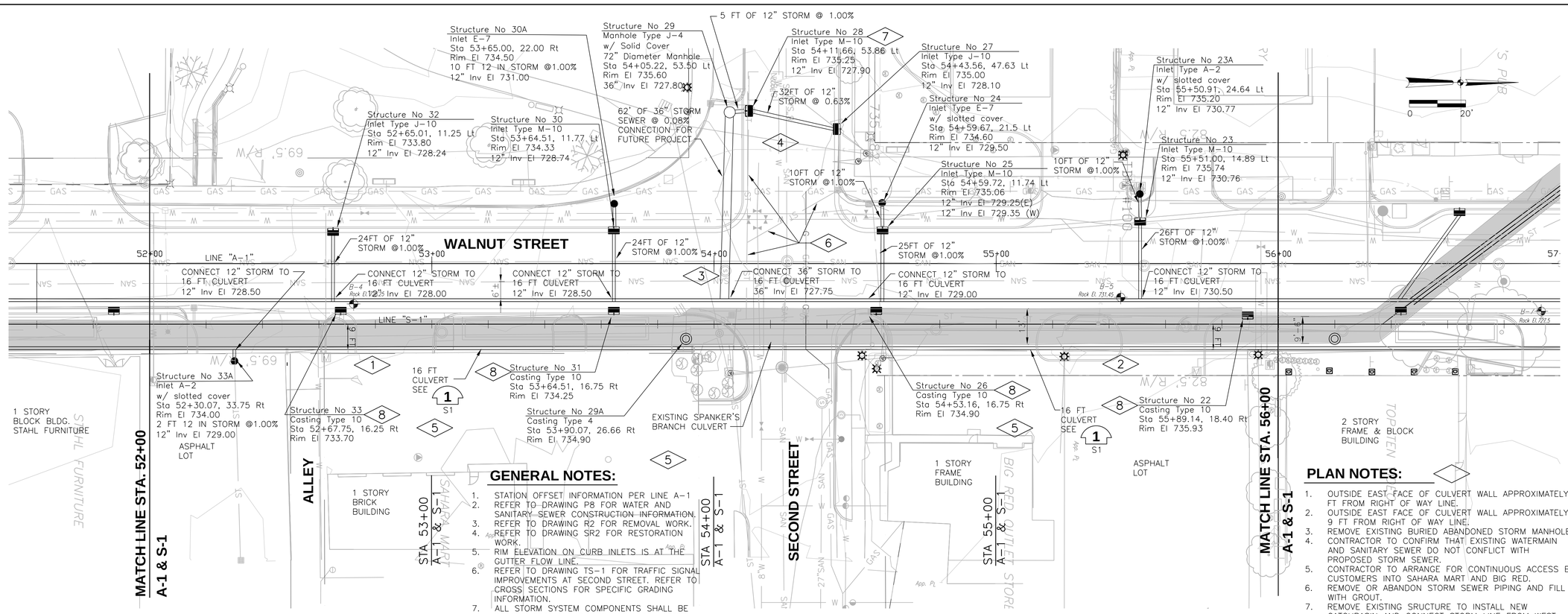
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 13

Drawing No. **P1**

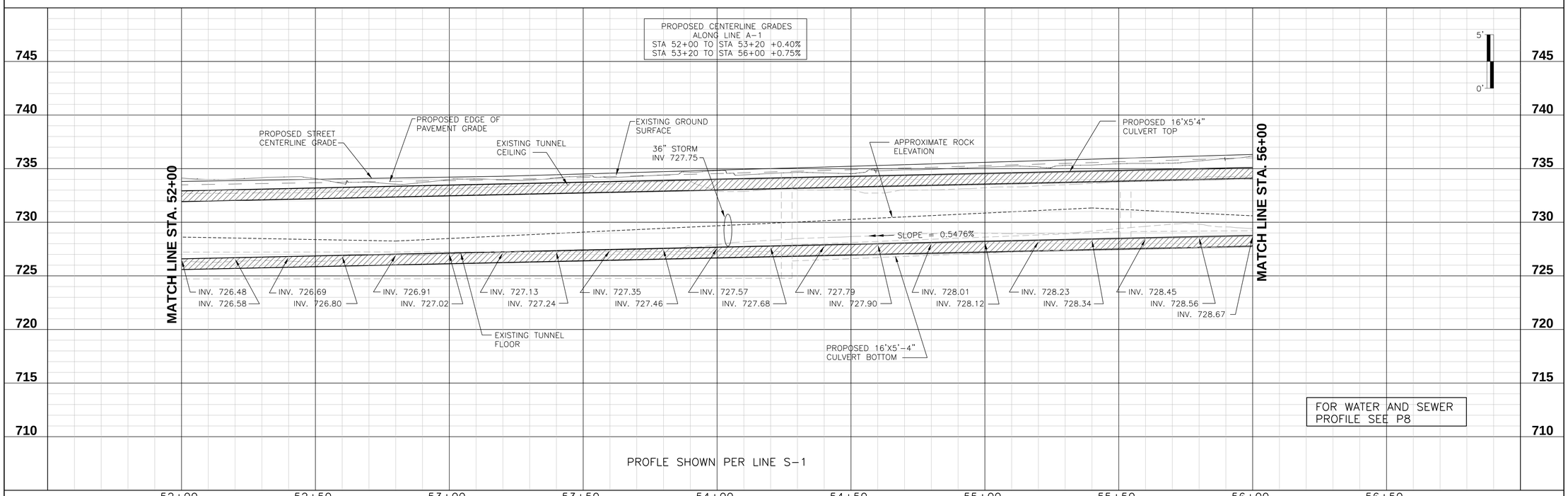


GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A-1
2. REFER TO DRAWING P8 FOR WATER AND SANITARY SEWER CONSTRUCTION INFORMATION.
3. REFER TO DRAWING R2 FOR REMOVAL WORK.
4. REFER TO DRAWING SR2 FOR RESTORATION WORK.
5. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
6. REFER TO DRAWING TS-1 FOR TRAFFIC SIGNAL IMPROVEMENTS AT SECOND STREET. REFER TO CROSS SECTIONS FOR SPECIFIC GRADING INFORMATION.
7. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. OUTSIDE EAST FACE OF CULVERT WALL APPROXIMATELY 1 FT FROM RIGHT OF WAY LINE.
2. OUTSIDE EAST FACE OF CULVERT WALL APPROXIMATELY 9 FT FROM RIGHT OF WAY LINE.
3. REMOVE EXISTING BURIED ABANDONED STORM MANHOLE .
4. CONTRACTOR TO CONFIRM THAT EXISTING WATERMAIN AND SANITARY SEWER DO NOT CONFLICT WITH PROPOSED STORM SEWER.
5. CONTRACTOR TO ARRANGE FOR CONTINUOUS ACCESS BY CUSTOMERS INTO SAHARA MART AND BIG RED.
6. REMOVE OR ABANDON STORM SEWER PIPING AND FILL WITH GROUT.
7. REMOVE EXISTING SRUCTURE TO INSTALL NEW CATCHBASIN AND CONNECT STORM LINE FROM WEST.
8. REFER TO DRAWING S-1 GENERAL NOTES FOR CASTING TO CULVERT STRUCTURE AND INSTALLATION OF OPENING IN CULVERT.



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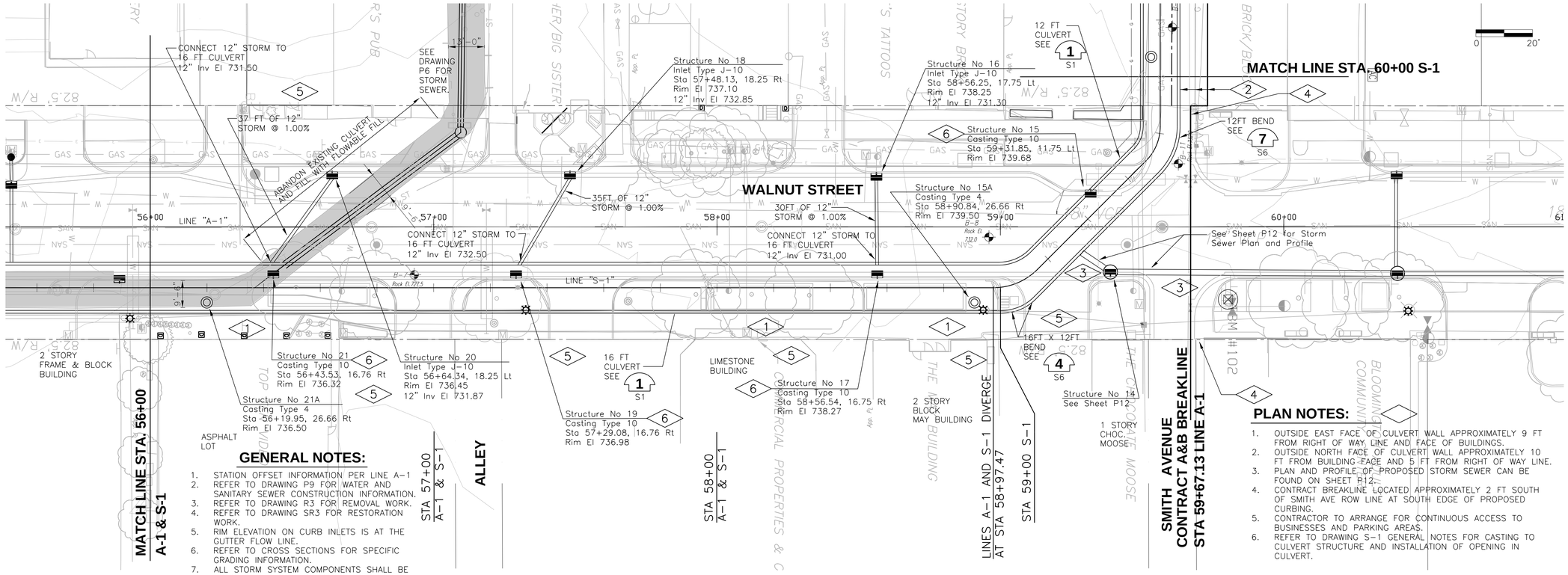
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 14

Drawing No. **P2**

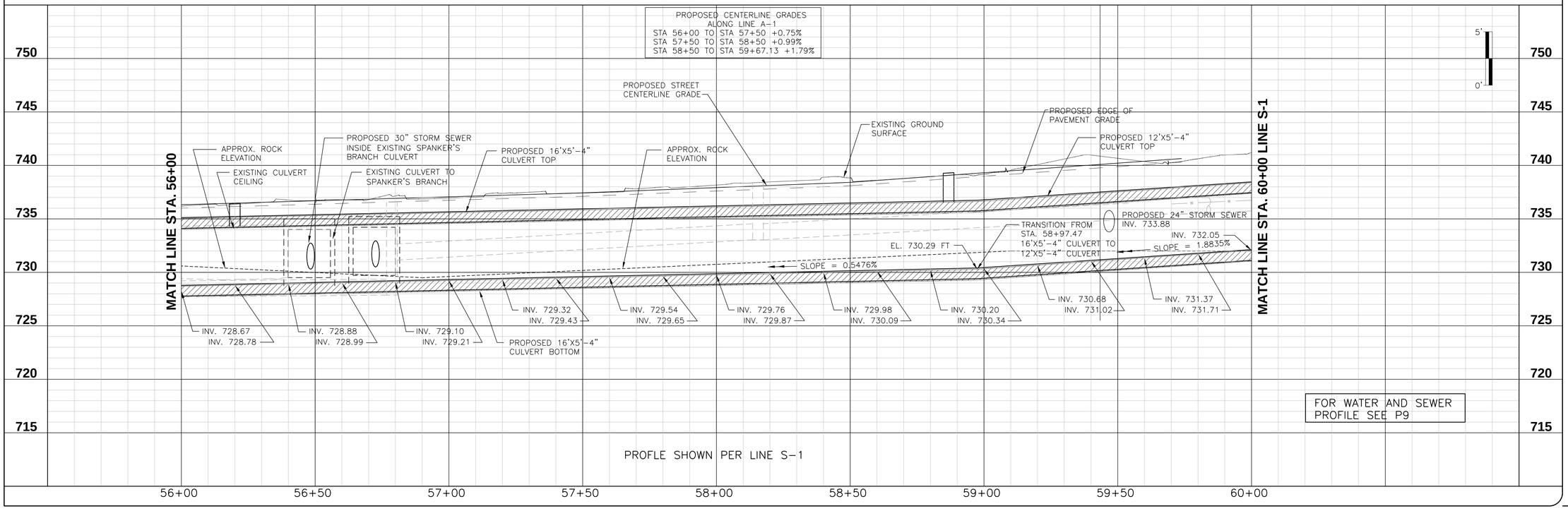


GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A-1
2. REFER TO DRAWING P9 FOR WATER AND SANITARY SEWER CONSTRUCTION INFORMATION.
3. REFER TO DRAWING R3 FOR REMOVAL WORK.
4. REFER TO DRAWING SR3 FOR RESTORATION WORK.
5. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
6. REFER TO CROSS SECTIONS FOR SPECIFIC GRADING INFORMATION.
7. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. OUTSIDE EAST FACE OF CULVERT WALL APPROXIMATELY 9 FT FROM RIGHT OF WAY LINE AND FACE OF BUILDINGS.
2. OUTSIDE NORTH FACE OF CULVERT WALL APPROXIMATELY 10 FT FROM BUILDING FACE AND 5 FT FROM RIGHT OF WAY LINE.
3. PLAN AND PROFILE OF PROPOSED STORM SEWER CAN BE FOUND ON SHEET P12.
4. CONTRACT BREAKLINE LOCATED APPROXIMATELY 2 FT SOUTH OF SMITH AVE ROW LINE AT SOUTH EDGE OF PROPOSED CURBING.
5. CONTRACTOR TO ARRANGE FOR CONTINUOUS ACCESS TO BUSINESSES AND PARKING AREAS.
6. REFER TO DRAWING S-1 GENERAL NOTES FOR CASTING TO CULVERT STRUCTURE AND INSTALLATION OF OPENING IN CULVERT.



PROFLE SHOWN PER LINE S-1

FOR WATER AND SEWER PROFILE SEE P9

Designed By	JAB
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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 15

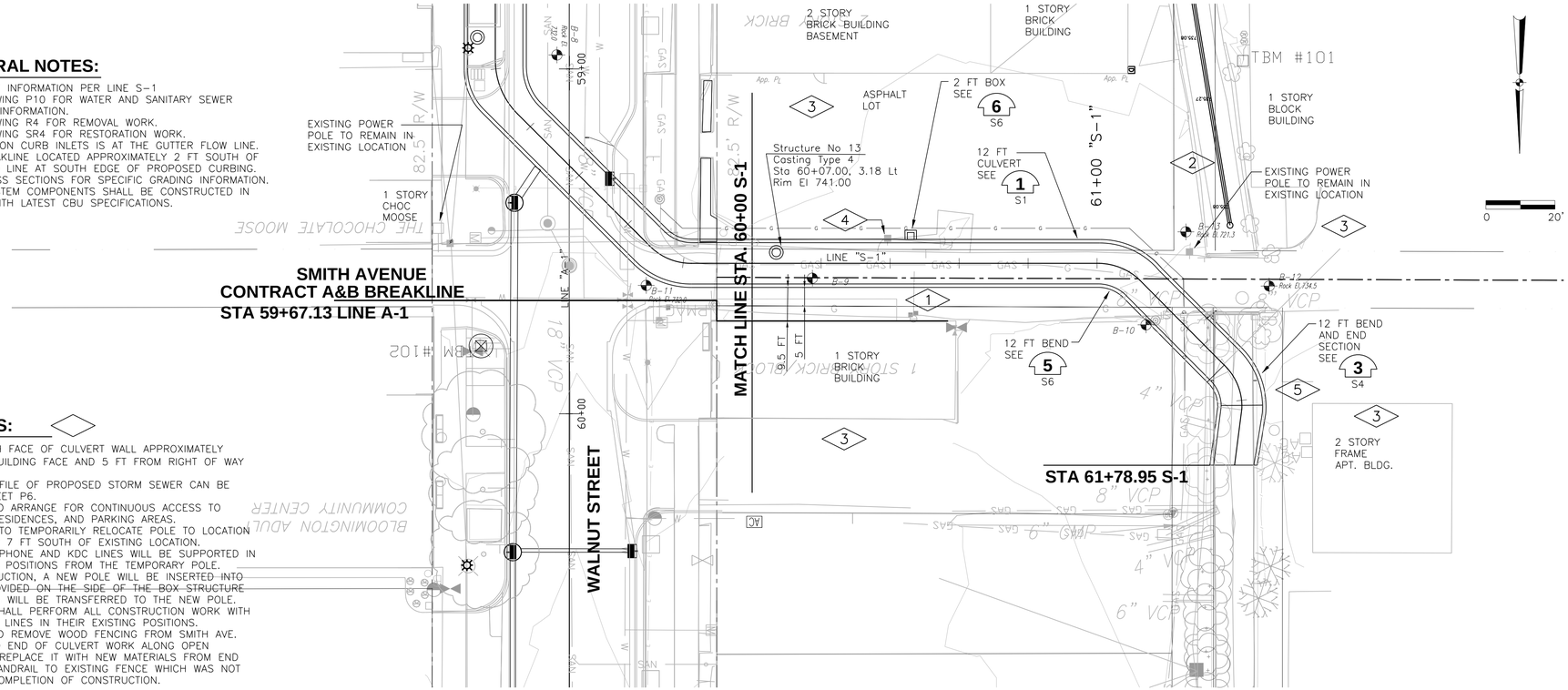
Drawing No. **P3**

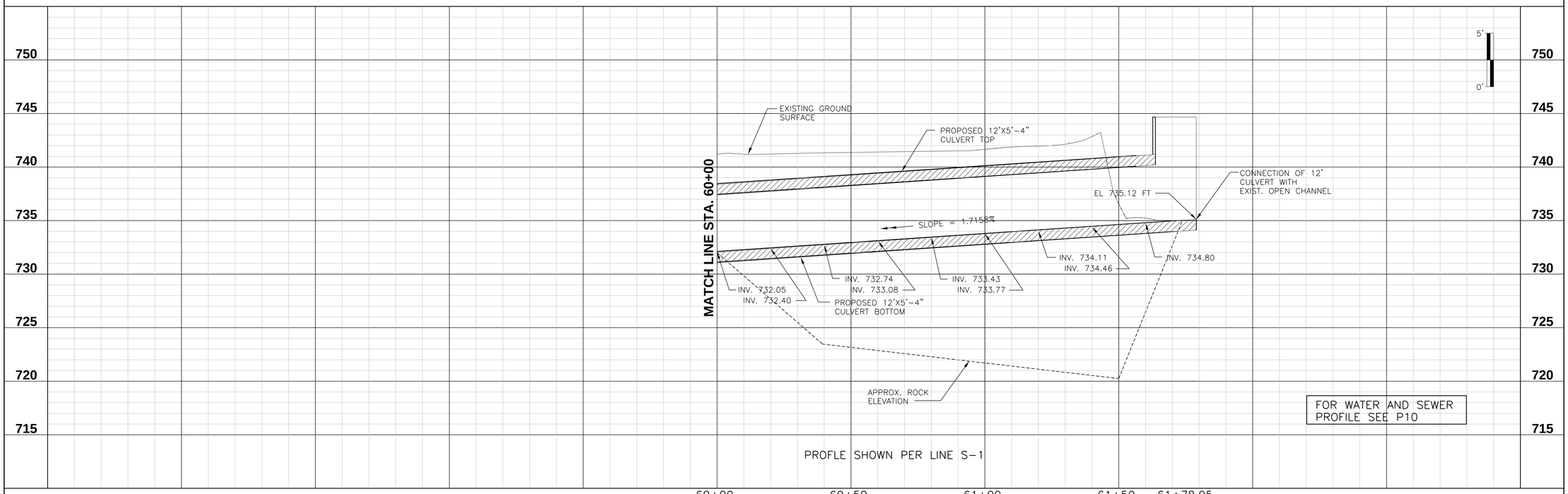
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE S–1
2. REFER TO DRAWING P10 FOR WATER AND SANITARY SEWER CONSTRUCTION INFORMATION.
3. REFER TO DRAWING R4 FOR REMOVAL WORK.
4. REFER TO DRAWING SR4 FOR RESTORATION WORK.
5. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
6. CONTRACT BREAKLINE LOCATED APPROXIMATELY 2 FT SOUTH OF SMITH AVE ROW LINE AT SOUTH EDGE OF PROPOSED CURBING.
7. REFER TO CROSS SECTIONS FOR SPECIFIC GRADING INFORMATION.
8. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. OUTSIDE NORTH FACE OF CULVERT WALL APPROXIMATELY 9'–6" FROM BUILDING FACE AND 5 FT FROM RIGHT OF WAY LINE.
2. PLAN AND PROFILE OF PROPOSED STORM SEWER CAN BE FOUND ON SHEET P6.
3. CONTRACTOR TO ARRANGE FOR CONTINUOUS ACCESS TO BUSINESSES, RESIDENCES, AND PARKING AREAS.
4. DUKE ENERGY TO TEMPORARILY RELOCATE POLE TO LOCATION APPROXIMATELY 7 FT SOUTH OF EXISTING LOCATION. ELECTRIC, TELEPHONE AND KDC LINES WILL BE SUPPORTED IN THEIR EXISTING POSITIONS FROM THE TEMPORARY POLE. AFTER CONSTRUCTION, A NEW POLE WILL BE INSERTED INTO THE FORM PROVIDED ON THE SIDE OF THE BOX STRUCTURE AND THE LINES WILL BE TRANSFERRED TO THE NEW POLE. CONTRACTOR SHALL PERFORM ALL CONSTRUCTION WORK WITH THE OVERHEAD LINES IN THEIR EXISTING POSITIONS.
5. CONTRACTOR TO REMOVE WOOD FENCING FROM SMITH AVE. ROW NORTH TO END OF CULVERT WORK ALONG OPEN CHANNEL AND REPLACE IT WITH NEW MATERIALS FROM END OF CULVERT HANDRAIL TO EXISTING FENCE WHICH WAS NOT REMOVED AT COMPLETION OF CONSTRUCTION.





FOR WATER AND SEWER PROFILE SEE P10

PROFLE SHOWN PER LINE S–1

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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 16

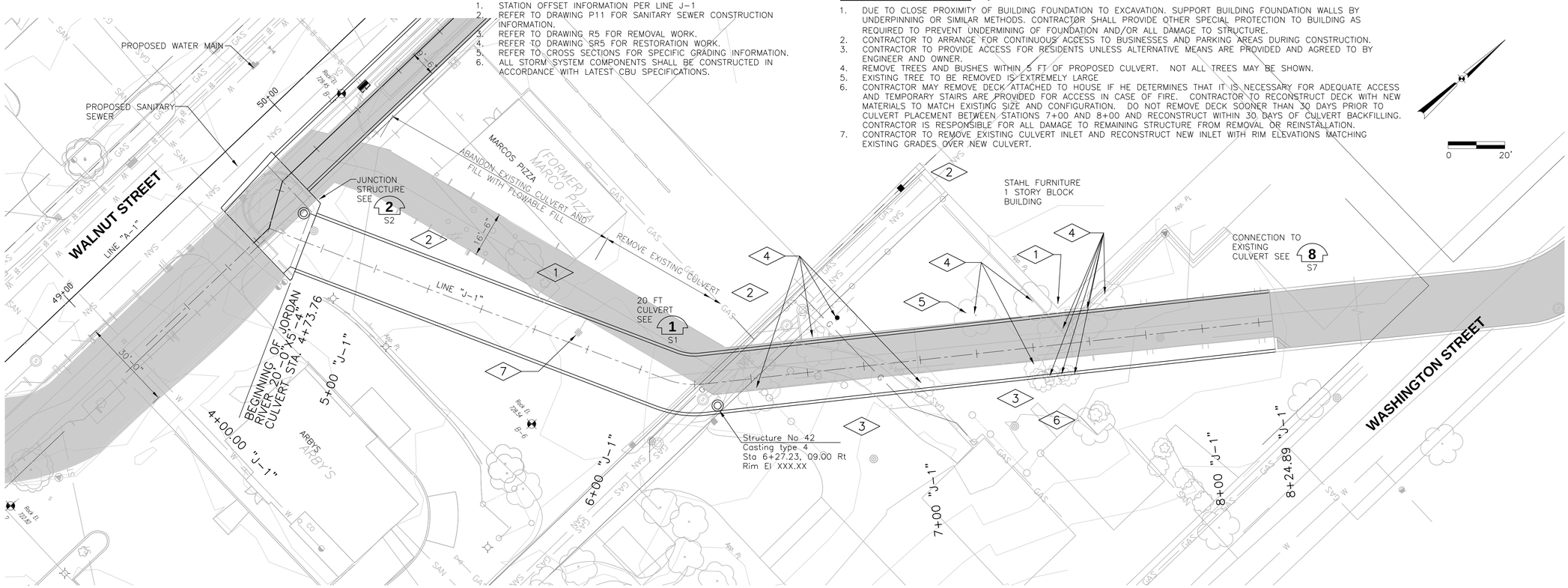
Drawing No. **P4**

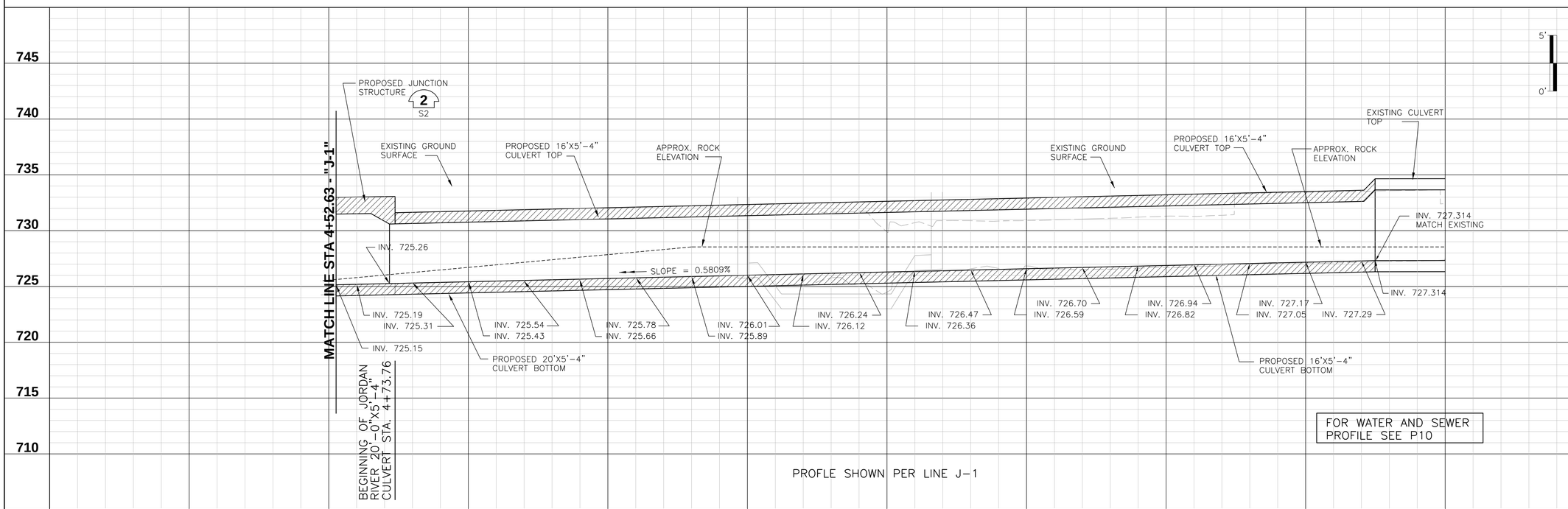
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE J-1
2. REFER TO DRAWING P11 FOR SANITARY SEWER CONSTRUCTION INFORMATION.
3. REFER TO DRAWING R5 FOR REMOVAL WORK.
4. REFER TO DRAWING SR5 FOR RESTORATION WORK.
5. REFER TO CROSS SECTIONS FOR SPECIFIC GRADING INFORMATION.
6. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. DUE TO CLOSE PROXIMITY OF BUILDING FOUNDATION TO EXCAVATION. SUPPORT BUILDING FOUNDATION WALLS BY UNDERPINNING OR SIMILAR METHODS. CONTRACTOR SHALL PROVIDE OTHER SPECIAL PROTECTION TO BUILDING AS REQUIRED TO PREVENT UNDERMINING OF FOUNDATION AND/OR ALL DAMAGE TO STRUCTURE.
2. CONTRACTOR TO ARRANGE FOR CONTINUOUS ACCESS TO BUSINESSES AND PARKING AREAS DURING CONSTRUCTION.
3. CONTRACTOR TO PROVIDE ACCESS FOR RESIDENTS UNLESS ALTERNATIVE MEANS ARE PROVIDED AND AGREED TO BY ENGINEER AND OWNER.
4. REMOVE TREES AND BUSHES WITHIN 5 FT OF PROPOSED CULVERT. NOT ALL TREES MAY BE SHOWN.
5. EXISTING TREE TO BE REMOVED IS EXTREMELY LARGE
6. CONTRACTOR MAY REMOVE DECK ATTACHED TO HOUSE IF HE DETERMINES THAT IT IS NECESSARY FOR ADEQUATE ACCESS AND TEMPORARY STAIRS ARE PROVIDED FOR ACCESS IN CASE OF FIRE. CONTRACTOR TO RECONSTRUCT DECK WITH NEW MATERIALS TO MATCH EXISTING SIZE AND CONFIGURATION. DO NOT REMOVE DECK SOONER THAN 30 DAYS PRIOR TO CULVERT PLACEMENT BETWEEN STATIONS 7+00 AND 8+00 AND RECONSTRUCT WITHIN 30 DAYS OF CULVERT BACKFILLING. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO REMAINING STRUCTURE FROM REMOVAL OR REINSTALLATION.
7. CONTRACTOR TO REMOVE EXISTING CULVERT INLET AND RECONSTRUCT NEW INLET WITH RIM ELEVATIONS MATCHING EXISTING GRADES OVER NEW CULVERT.





FOR WATER AND SEWER PROFILE SEE P10

PROFLE SHOWN PER LINE J-1

Designed By	JAB
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Checked By	TJM
Approved By	PNE
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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 17

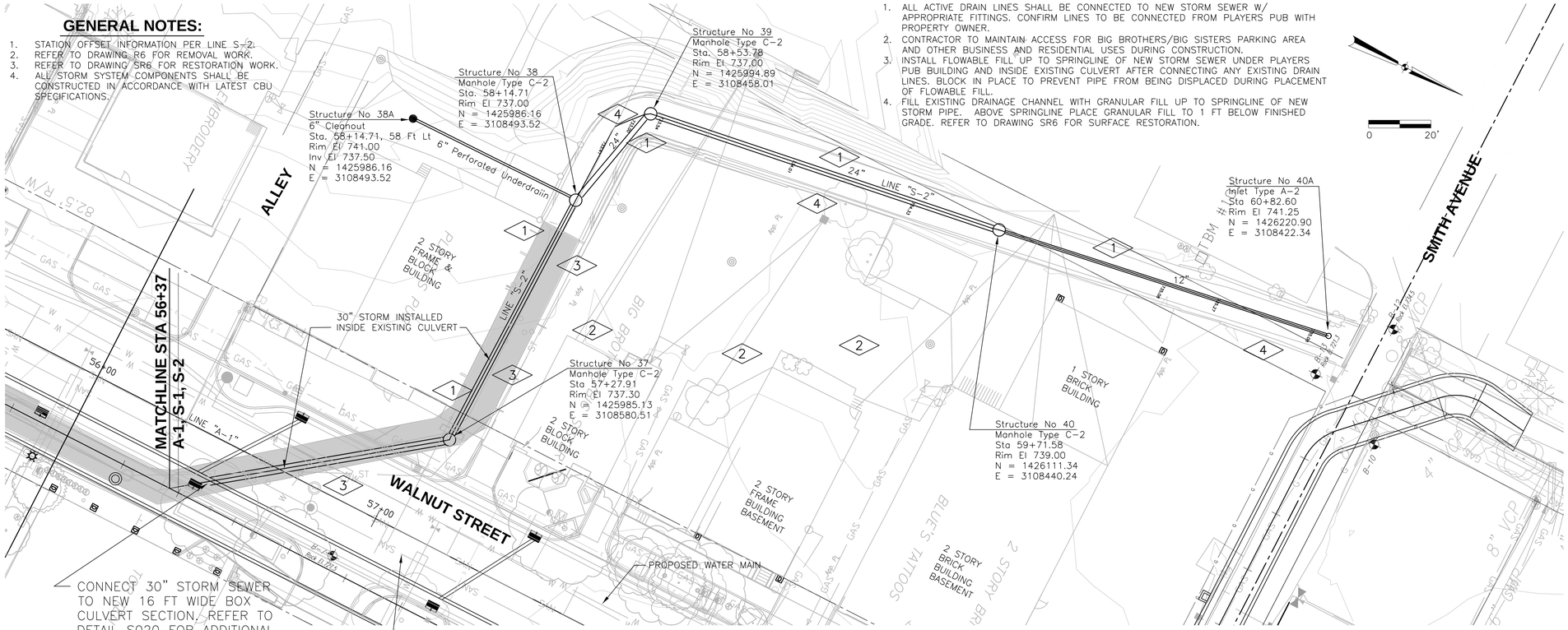
Drawing No. **P5**

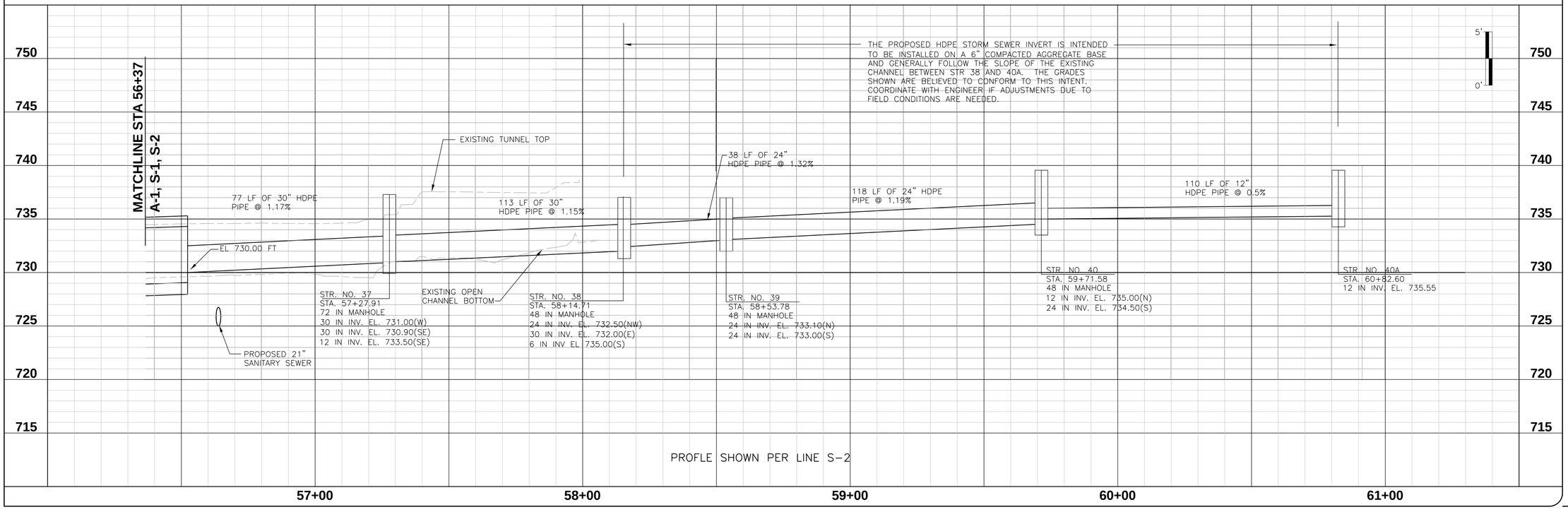
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE S-2.
2. REFER TO DRAWING R6 FOR REMOVAL WORK.
3. REFER TO DRAWING SR6 FOR RESTORATION WORK.
4. ALL STORM SYSTEM COMPONENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. ALL ACTIVE DRAIN LINES SHALL BE CONNECTED TO NEW STORM SEWER W/ APPROPRIATE FITTINGS. CONFIRM LINES TO BE CONNECTED FROM PLAYERS PUB WITH PROPERTY OWNER.
2. CONTRACTOR TO MAINTAIN ACCESS FOR BIG BROTHERS/BIG SISTERS PARKING AREA AND OTHER BUSINESS AND RESIDENTIAL USES DURING CONSTRUCTION.
3. INSTALL FLOWABLE FILL UP TO SPRINGLINE OF NEW STORM SEWER UNDER PLAYERS PUB BUILDING AND INSIDE EXISTING CULVERT AFTER CONNECTING ANY EXISTING DRAIN LINES. BLOCK IN PLACE TO PREVENT PIPE FROM BEING DISPLACED DURING PLACEMENT OF FLOWABLE FILL.
4. FILL EXISTING DRAINAGE CHANNEL WITH GRANULAR FILL UP TO SPRINGLINE OF NEW STORM PIPE. ABOVE SPRINGLINE PLACE GRANULAR FILL TO 1 FT BELOW FINISHED GRADE. REFER TO DRAWING SR6 FOR SURFACE RESTORATION.





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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

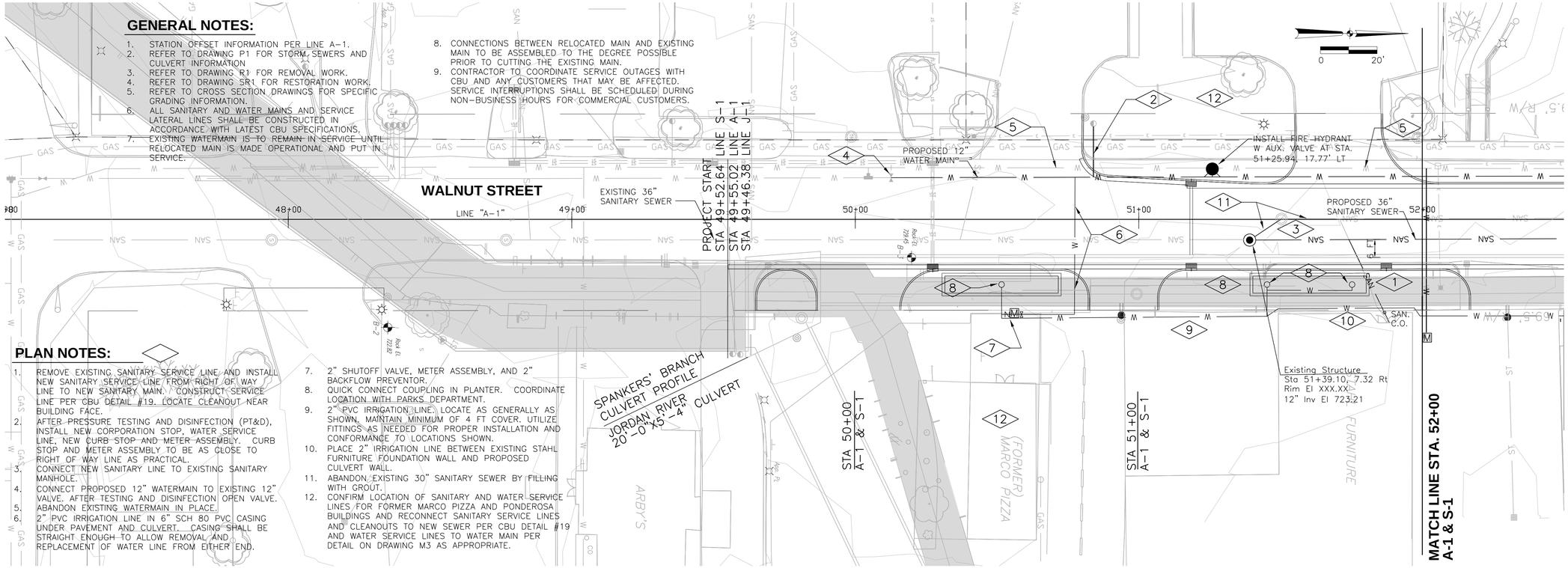
DONOHUE & ASSOCIATES

Sheet No. 18

Drawing No. **P6**

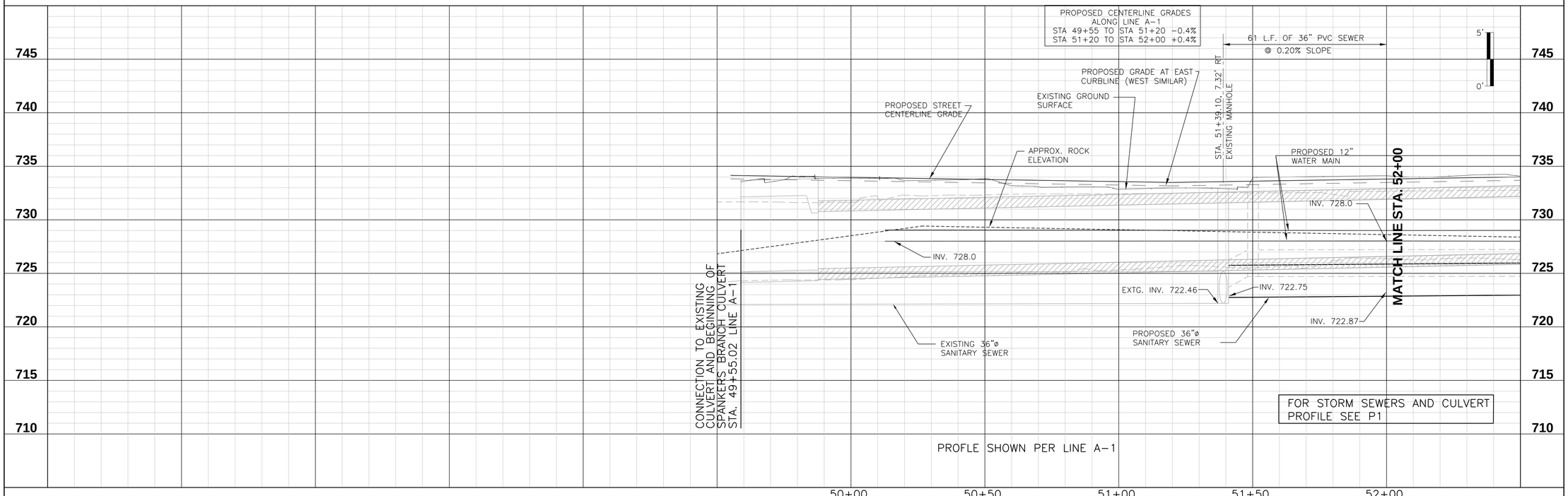
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A–1.
2. REFER TO DRAWING P1 FOR STORM SEWERS AND CULVERT INFORMATION
3. REFER TO DRAWING R1 FOR REMOVAL WORK.
4. REFER TO DRAWING SR1 FOR RESTORATION WORK.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
6. ALL SANITARY AND WATER MAINS AND SERVICE LATERAL LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.
7. EXISTING WATERMAIN IS TO REMAIN IN SERVICE UNTIL RELOCATED MAIN IS MADE OPERATIONAL AND PUT IN SERVICE.
8. CONNECTIONS BETWEEN RELOCATED MAIN AND EXISTING MAIN TO BE ASSEMBLED TO THE DEGREE POSSIBLE PRIOR TO CUTTING THE EXISTING MAIN.
9. CONTRACTOR TO COORDINATE SERVICE OUTAGES WITH CBU AND ANY CUSTOMERS THAT MAY BE AFFECTED. SERVICE INTERRUPTIONS SHALL BE SCHEDULED DURING NON–BUSINESS HOURS FOR COMMERCIAL CUSTOMERS.



PLAN NOTES:

1. REMOVE EXISTING SANITARY SERVICE LINE AND INSTALL NEW SANITARY SERVICE LINE FROM RIGHT OF WAY LINE TO NEW SANITARY MAIN. CONSTRUCT SERVICE LINE PER CBU DETAIL #19. LOCATE CLEANOUT NEAR BUILDING FACE.
2. AFTER PRESSURE TESTING AND DISINFECTION (PT&D), INSTALL NEW CORPORATION STOP, WATER SERVICE LINE, NEW CURB STOP AND METER ASSEMBLY. CURB STOP AND METER ASSEMBLY TO BE AS CLOSE TO RIGHT OF WAY LINE AS PRACTICAL.
3. CONNECT NEW SANITARY LINE TO EXISTING SANITARY MANHOLE.
4. CONNECT PROPOSED 12" WATERMAIN TO EXISTING 12" VALVE. AFTER TESTING AND DISINFECTION OPEN VALVE.
5. ABANDON EXISTING WATERMAIN IN PLACE.
6. 2" IPVC IRRIGATION LINE IN 6" SCH 80 PVC CASING UNDER PAVEMENT AND CULVERT. CASING SHALL BE STRAIGHT ENOUGH TO ALLOW REMOVAL AND REPLACEMENT OF WATER LINE FROM EITHER END.
7. 2" SHUTOFF VALVE, METER ASSEMBLY, AND 2" BACKFLOW PREVENTOR.
8. QUICK CONNECT COUPLING IN PLANTER. COORDINATE LOCATION WITH PARKS DEPARTMENT.
9. 2" PVC IRRIGATION LINE. LOCATE AS GENERALLY AS SHOWN. MAINTAIN MINIMUM OF 4 FT COVER. UTILIZE FITTINGS AS NEEDED FOR PROPER INSTALLATION AND CONFORMANCE TO LOCATIONS SHOWN.
10. PLACE 2" IRRIGATION LINE BETWEEN EXISTING STAHL FURNITURE FOUNDATION WALL AND PROPOSED CULVERT WALL.
11. ABANDON EXISTING 30" SANITARY SEWER BY FILLING WITH GROUT.
12. CONFIRM LOCATION OF SANITARY AND WATER SERVICE LINES FOR FORMER MARCO PIZZA AND PONDEROSA BUILDINGS AND RECONNECT SANITARY SERVICE LINES AND CLEANOUTS TO NEW SEWER PER CBU DETAIL #19 AND WATER SERVICE LINES TO WATER MAIN PER DETAIL ON DRAWING M3 AS APPROPRIATE.



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED SANITARY SEWER & WATERMAIN

DONOHUE & ASSOCIATES

Sheet No. 19

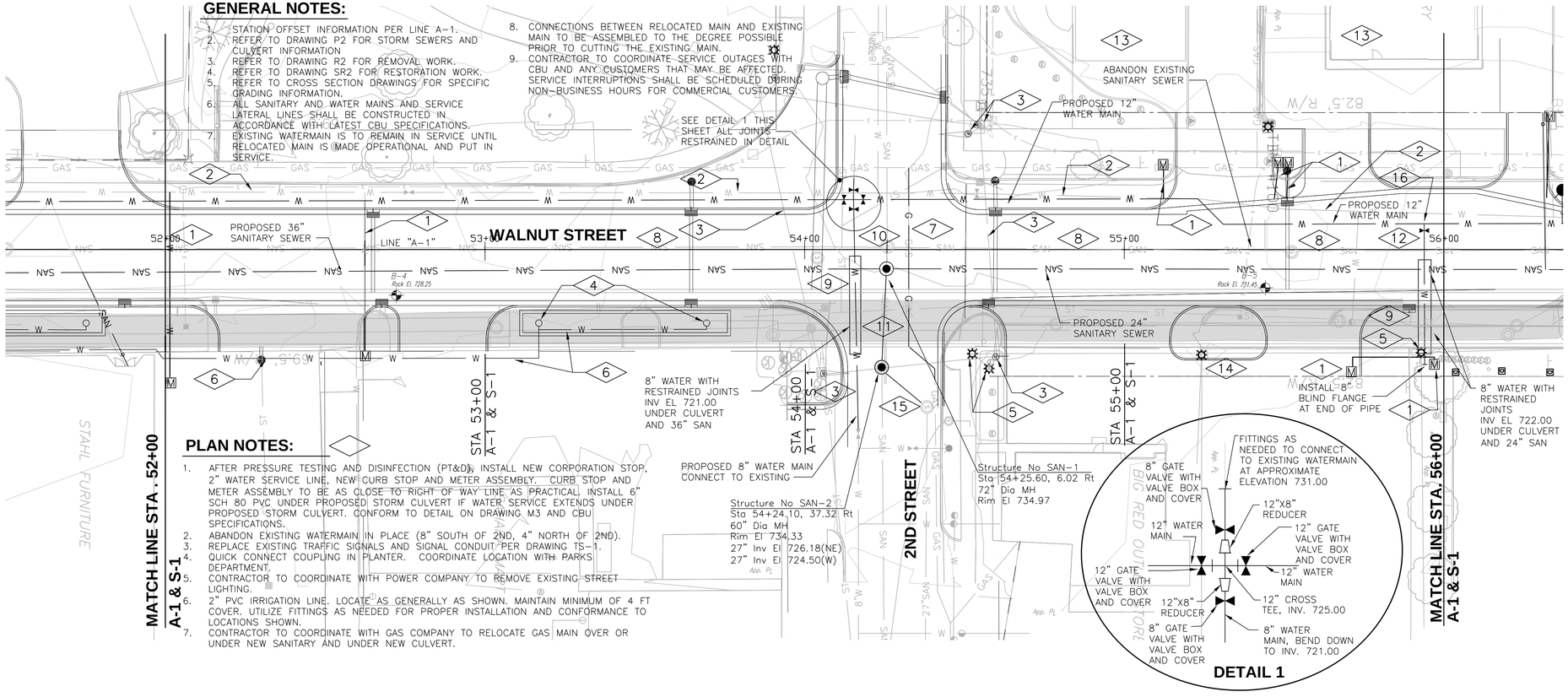
Drawing No. **P7**

GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A–1.
2. REFER TO DRAWING P2 FOR STORM SEWERS AND CULVERT INFORMATION
3. REFER TO DRAWING R2 FOR REMOVAL WORK.
4. REFER TO DRAWING SR2 FOR RESTORATION WORK.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
6. ALL SANITARY AND WATER MAINS AND SERVICE LATERAL LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.
7. EXISTING WATERMAIN IS TO REMAIN IN SERVICE UNTIL RELOCATED MAIN IS MADE OPERATIONAL AND PUT IN SERVICE.
8. CONNECTIONS BETWEEN RELOCATED MAIN AND EXISTING MAIN TO BE ASSEMBLED TO THE DEGREE POSSIBLE PRIOR TO CUTTING THE EXISTING MAIN.
9. CONTRACTOR TO COORDINATE SERVICE OUTAGES WITH CBU AND ANY CUSTOMERS THAT MAY BE AFFECTED. SERVICE INTERRUPTIONS SHALL BE SCHEDULED DURING NON–BUSINESS HOURS FOR COMMERCIAL CUSTOMERS.

PLAN NOTES:

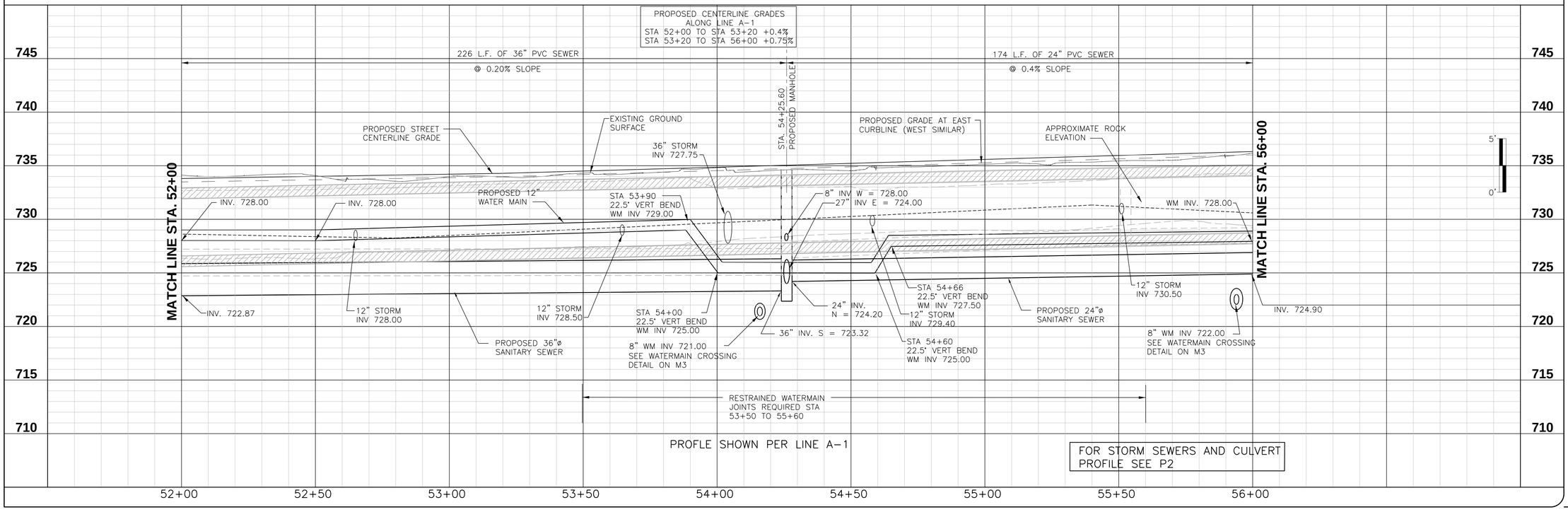
1. AFTER PRESSURE TESTING AND DISINFECTION (PT&D), INSTALL NEW CORPORATION STOP, 2" WATER SERVICE LINE, NEW CURB STOP AND METER ASSEMBLY. CURB STOP AND METER ASSEMBLY TO BE AS CLOSE TO RIGHT OF WAY LINE AS PRACTICAL. INSTALL 6" SCH 80 PVC UNDER PROPOSED STORM CULVERT IF WATER SERVICE EXTENDS UNDER PROPOSED STORM CULVERT. CONFORM TO DETAIL ON DRAWING M3 AND CBU SPECIFICATIONS.
2. ABANDON EXISTING WATERMAIN IN PLACE (8" SOUTH OF 2ND, 4" NORTH OF 2ND).
3. REPLACE EXISTING TRAFFIC SIGNALS AND SIGNAL CONDUIT PER DRAWING TS–1.
4. QUICK CONNECT COUPLING IN PLANTER. COORDINATE LOCATION WITH PARKS DEPARTMENT.
5. CONTRACTOR TO COORDINATE WITH POWER COMPANY TO REMOVE EXISTING STREET LIGHTING.
6. 2" PVC IRRIGATION LINE. LOCATE AS GENERALLY AS SHOWN. MAINTAIN MINIMUM OF 4 FT COVER. UTILIZE FITTINGS AS NEEDED FOR PROPER INSTALLATION AND CONFORMANCE TO LOCATIONS SHOWN.
7. CONTRACTOR TO COORDINATE WITH GAS COMPANY TO RELOCATE GAS MAIN OVER OR UNDER NEW SANITARY AND UNDER NEW CULVERT.



PLAN NOTES:

8. ABANDON EXISTING 18 AND 30" SANITARY SEWERS BY FILLING WITH GROUT. REMOVE UPPER 3 FEET OF SANITARY MANHOLES ON ABANDONED SEWERS, CUT 2–6" HOLES IN BOTTOM, AND FILL WITH SAND.
9. INSTALL NEW WATER MAIN IN STEEL CASING PIPE UNDER SANITARY SEWER AND NEW CULVERT. SEE DETAIL DRAWING M3 FOR MORE INFORMATION.
10. REMOVE EXISTING SANITARY SEWER MANHOLE AND CONNECT 8"ø SANITARY SEWER FROM WEST TO NEW SANITARY MANHOLE. INSTALL NON–SHEAR COUPLING BETWEEN EXISTING AND NEW SEWERS.
11. INSTALL NEW 27"ø SANITARY SEWER UNDER CULVERT.
12. INSTALL 8" VALVE WITH VALVE BOX AND COVER.
13. CONFIRM LOCATION OF EXISTING SERVICE LATERAL AND RECONNECT TO NEW SANITARY LINE IF LOCATED IN WALNUT STREET. REPLACE LATERAL BETWEEN NEW SANITARY LINE AND RIGHT OF WAY LINE AND INSTALL CLEANOUT FOR EACH SERVICE IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS.
14. CONTRACTOR TO REMOVE AND REINSTALL LIGHT OWNED BY PROPERTY OWNER.
15. REMOVE EXISTING SANITARY MANHOLE AND CONSTRUCT MANHOLE SAN–2 IN SAME LOCATION. CONNECT TO EXISTING SANITARY MANHOLE ON 2ND STREET WITH 27" SANITARY LINE AT EXISTING ELEVATION.
16. RESTRAINED JOINT 12"X8" TEE SECTION

DETAIL 1



Designed By	JAB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	246CP2.DWG
Project No.	11340&11721
Project Date	12/2/11

Date | Checked By | Drawn By | Revision Description | Revision Number

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED SANITARY SEWER & WATERMAIN

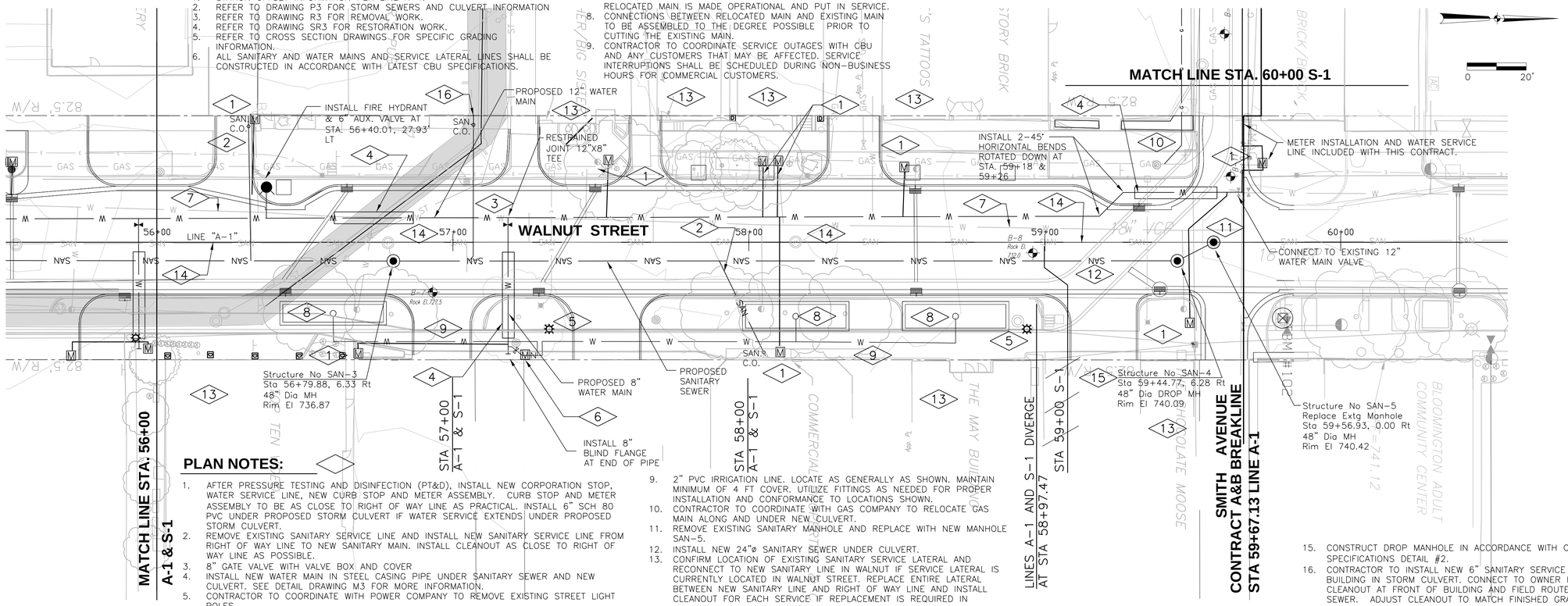
DONOHUE & ASSOCIATES

Sheet No. 20

Drawing No. **P8**

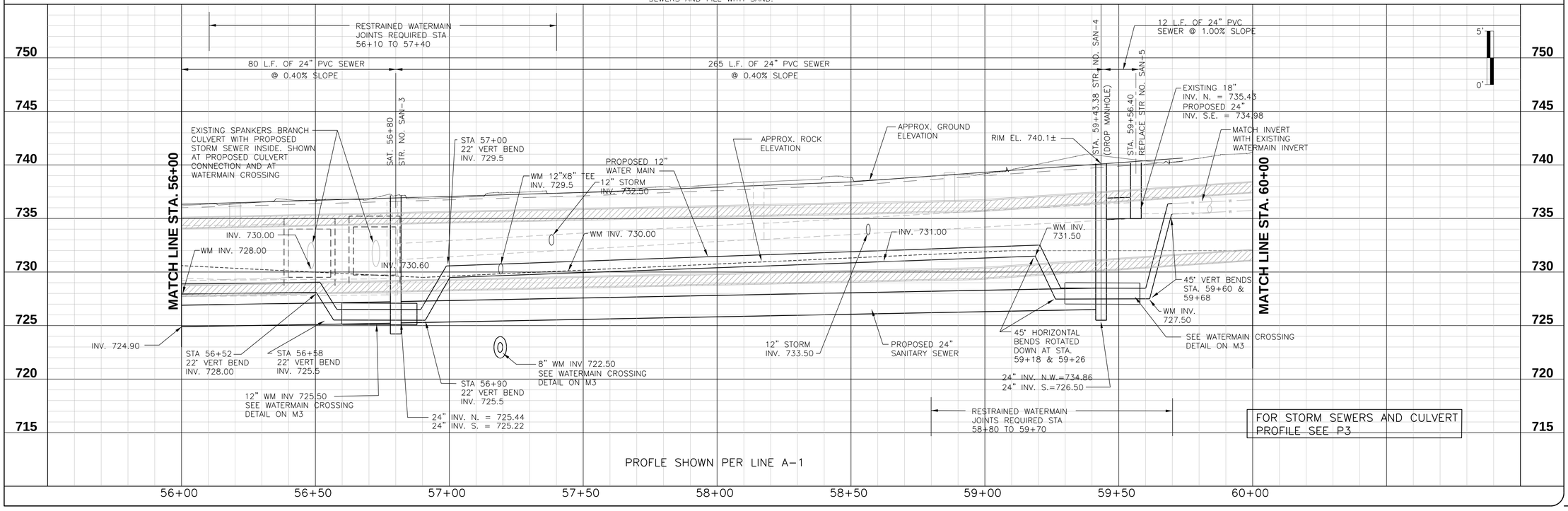
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A–1.
2. REFER TO DRAWING P3 FOR STORM SEWERS AND CULVERT INFORMATION
3. REFER TO DRAWING R3 FOR REMOVAL WORK.
4. REFER TO DRAWING SR3 FOR RESTORATION WORK.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
6. ALL SANITARY AND WATER MAINS AND SERVICE LATERAL LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.
7. EXISTING WATERMAIN IS TO REMAIN IN SERVICE UNTIL RELOCATED MAIN IS MADE OPERATIONAL AND PUT IN SERVICE.
8. CONNECTIONS BETWEEN RELOCATED MAIN AND EXISTING MAIN TO BE ASSEMBLED TO THE DEGREE POSSIBLE PRIOR TO CUTTING THE EXISTING MAIN.
9. CONTRACTOR TO COORDINATE SERVICE OUTAGES WITH CBU AND ANY CUSTOMERS THAT MAY BE AFFECTED. SERVICE INTERRUPTIONS SHALL BE SCHEDULED DURING NON–BUSINESS HOURS FOR COMMERCIAL CUSTOMERS.



PLAN NOTES:

1. AFTER PRESSURE TESTING AND DISINFECTION (PT&D), INSTALL NEW CORPORATION STOP, WATER SERVICE LINE, NEW CURB STOP AND METER ASSEMBLY. CURB STOP AND METER ASSEMBLY TO BE AS CLOSE TO RIGHT OF WAY LINE AS PRACTICAL. INSTALL 6" SCH 80 PVC UNDER PROPOSED STORM CULVERT IF WATER SERVICE EXTENDS UNDER PROPOSED STORM CULVERT.
2. REMOVE EXISTING SANITARY SERVICE LINE AND INSTALL NEW SANITARY SERVICE LINE FROM RIGHT OF WAY LINE TO NEW SANITARY MAIN. INSTALL CLEANOUT AS CLOSE TO RIGHT OF WAY LINE AS POSSIBLE.
3. 8" GATE VALVE WITH VALVE BOX AND COVER
4. INSTALL NEW WATER MAIN IN STEEL CASING PIPE UNDER SANITARY SEWER AND NEW CULVERT. SEE DETAIL DRAWING M3 FOR MORE INFORMATION.
5. CONTRACTOR TO COORDINATE WITH POWER COMPANY TO REMOVE EXISTING STREET LIGHT POLES.
6. 2" SHUTOFF VALVE, METER ASSEMBLY, AND 2" BACKFLOW PREVENTOR.
7. ABANDON EXISTING 4" WATERMAIN IN PLACE.
8. QUICK CONNECT COUPLING IN PLANTER. COORDINATE LOCATION WITH PARKS DEPARTMENT.
9. 2" PVC IRRIGATION LINE. LOCATE AS GENERALLY AS SHOWN. MAINTAIN MINIMUM OF 4 FT COVER. UTILIZE FITTINGS AS NEEDED FOR PROPER INSTALLATION AND CONFORMANCE TO LOCATIONS SHOWN.
10. CONTRACTOR TO COORDINATE WITH GAS COMPANY TO RELOCATE GAS MAIN ALONG AND UNDER NEW CULVERT.
11. REMOVE EXISTING SANITARY MANHOLE AND REPLACE WITH NEW MANHOLE SAN–5.
12. INSTALL NEW 24"ø SANITARY SEWER UNDER CULVERT.
13. CONFIRM LOCATION OF EXISTING SANITARY SERVICE LATERAL AND RECONNECT TO NEW SANITARY LINE IN WALNUT IF SERVICE LATERAL IS CURRENTLY LOCATED IN WALNUT STREET. REPLACE ENTIRE LATERAL BETWEEN NEW SANITARY LINE AND RIGHT OF WAY LINE AND INSTALL CLEANOUT FOR EACH SERVICE IF REPLACEMENT IS REQUIRED IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS.
14. ABANDON EXISTING 18" SANITARY SEWER BY FILLING WITH GROUT. REMOVE UPPER 3 FEET OF SANITARY MANHOLES ON ABANDONED SEWERS AND FILL WITH SAND.
15. CONSTRUCT DROP MANHOLE IN ACCORDANCE WITH CBU STANDARD SPECIFICATIONS DETAIL #2.
16. CONTRACTOR TO INSTALL NEW 6" SANITARY SERVICE LOCATED UNDER BUILDING IN STORM CULVERT. CONNECT TO OWNER INSTALLED SANITARY CLEANOUT AT FRONT OF BUILDING AND FIELD ROUTE TO NEW SANITARY SEWER. ADJUST CLEANOUT TO MATCH FINISHED GRADE.



Designed By	JAB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED SANITARY SEWER & WATERMAIN

DONOHUE & ASSOCIATES

Sheet No. 21

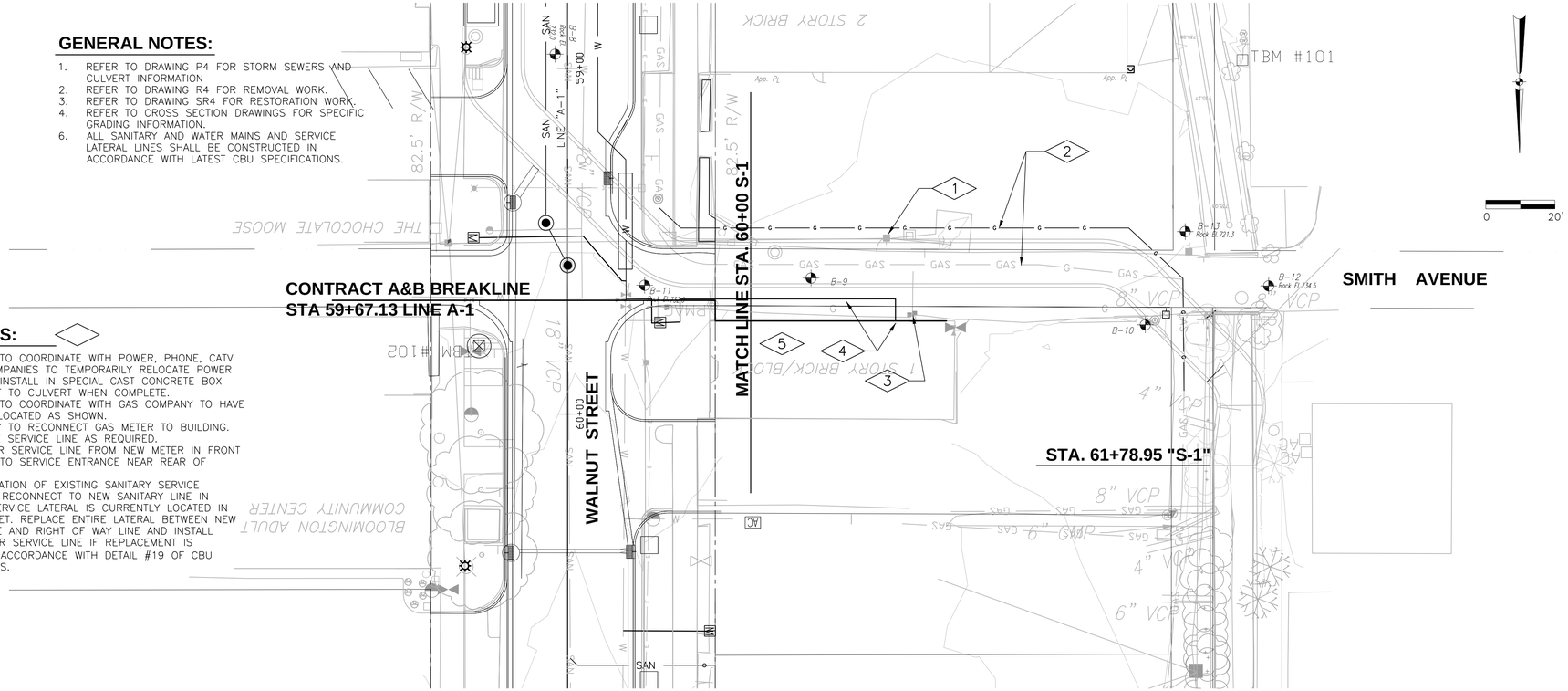
Drawing No. **P9**

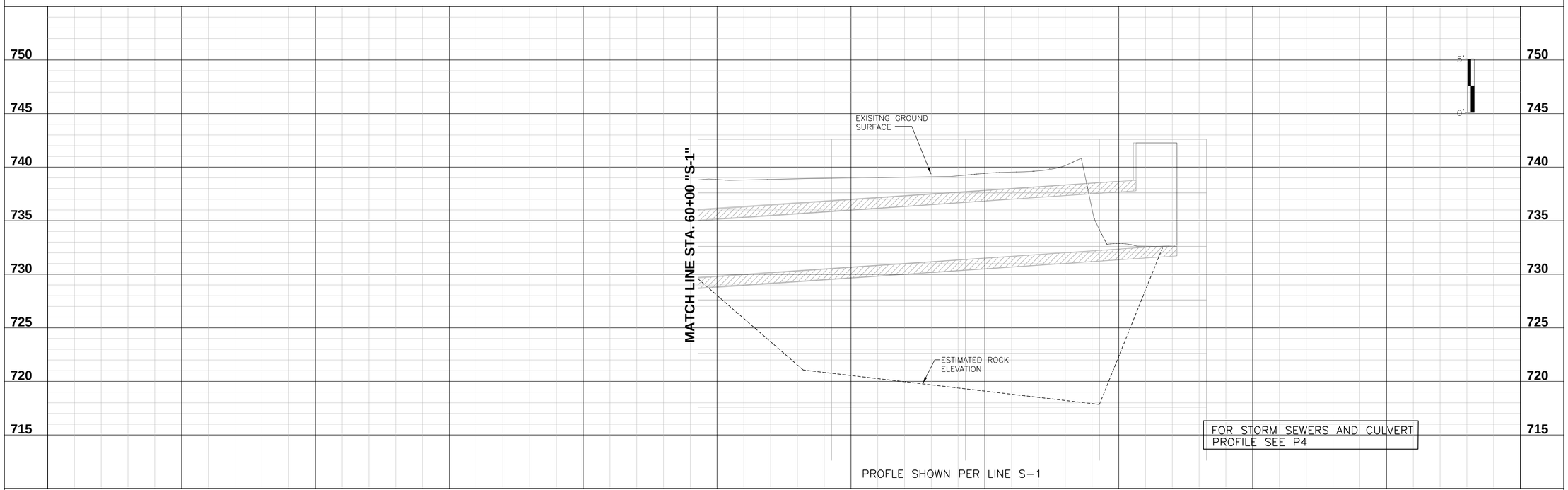
GENERAL NOTES:

1. REFER TO DRAWING P4 FOR STORM SEWERS AND CULVERT INFORMATION
2. REFER TO DRAWING R4 FOR REMOVAL WORK.
3. REFER TO DRAWING SR4 FOR RESTORATION WORK.
4. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
6. ALL SANITARY AND WATER MAINS AND SERVICE LATERAL LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.

PLAN NOTES:

1. CONTRACTOR TO COORDINATE WITH POWER, PHONE, CATV AND KDL COMPANIES TO TEMPORARILY RELOCATE POWER POLE AND REINSTALL IN SPECIAL CAST CONCRETE BOX SECTION NEXT TO CULVERT WHEN COMPLETE.
2. CONTRACTOR TO COORDINATE WITH GAS COMPANY TO HAVE GAS MAIN RELOCATED AS SHOWN.
3. GAS COMPANY TO RECONNECT GAS METER TO BUILDING. AND REROUTE SERVICE LINE AS REQUIRED.
4. EXTEND WATER SERVICE LINE FROM NEW METER IN FRONT OF BUILDING TO SERVICE ENTRANCE NEAR REAR OF BUILDING.
5. CONFIRM LOCATION OF EXISTING SANITARY SERVICE LATERAL AND RECONNECT TO NEW SANITARY LINE IN WALNUT IF SERVICE LATERAL IS CURRENTLY LOCATED IN WALNUT STREET. REPLACE ENTIRE LATERAL BETWEEN NEW SANITARY LINE AND RIGHT OF WAY LINE AND INSTALL CLEANOUT FOR SERVICE LINE IF REPLACEMENT IS REQUIRED IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS.





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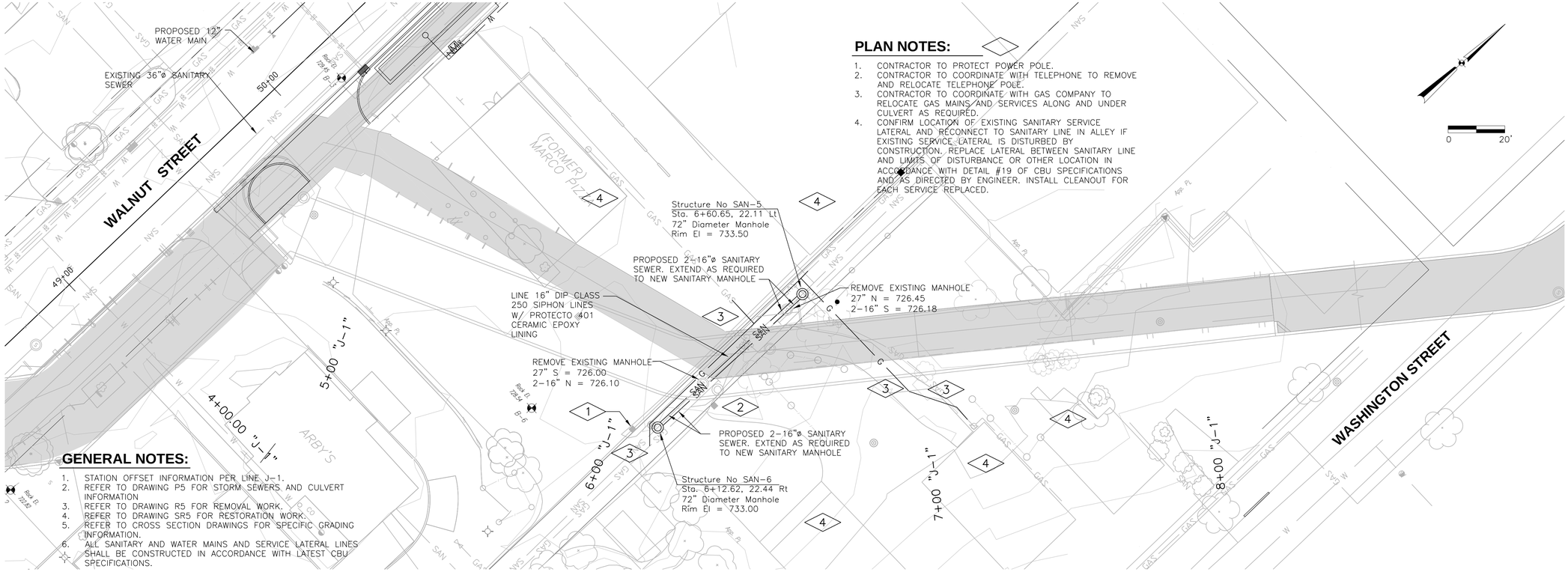
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED SANITARY SEWER & WATERMAIN

DONOHUE & ASSOCIATES

Sheet No. 22

Drawing No. **P10**

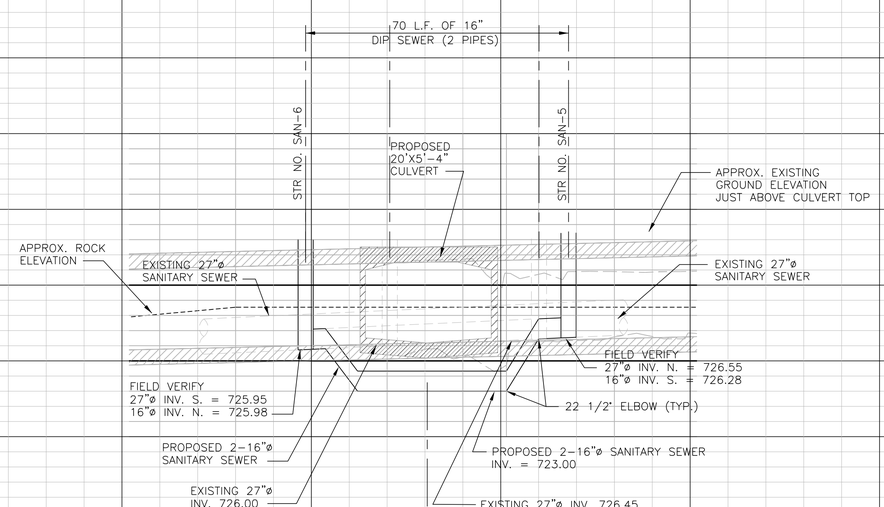


PLAN NOTES:

1. CONTRACTOR TO PROTECT POWER POLE.
2. CONTRACTOR TO COORDINATE WITH TELEPHONE TO REMOVE AND RELOCATE TELEPHONE POLE.
3. CONTRACTOR TO COORDINATE WITH GAS COMPANY TO RELOCATE GAS MAINS AND SERVICES ALONG AND UNDER CULVERT AS REQUIRED.
4. CONFIRM LOCATION OF EXISTING SANITARY SERVICE LATERAL AND RECONNECT TO SANITARY LINE IN ALLEY IF EXISTING SERVICE LATERAL IS DISTURBED BY CONSTRUCTION. REPLACE LATERAL BETWEEN SANITARY LINE AND LIMITS OF DISTURBANCE OR OTHER LOCATION IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS AND AS DIRECTED BY ENGINEER. INSTALL CLEANOUT FOR EACH SERVICE REPLACED.

GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE J-1.
2. REFER TO DRAWING P5 FOR STORM SEWERS AND CULVERT INFORMATION
3. REFER TO DRAWING R5 FOR REMOVAL WORK.
4. REFER TO DRAWING SR5 FOR RESTORATION WORK.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.
6. ALL SANITARY AND WATER MAINS AND SERVICE LATERAL LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST CBU SPECIFICATIONS.



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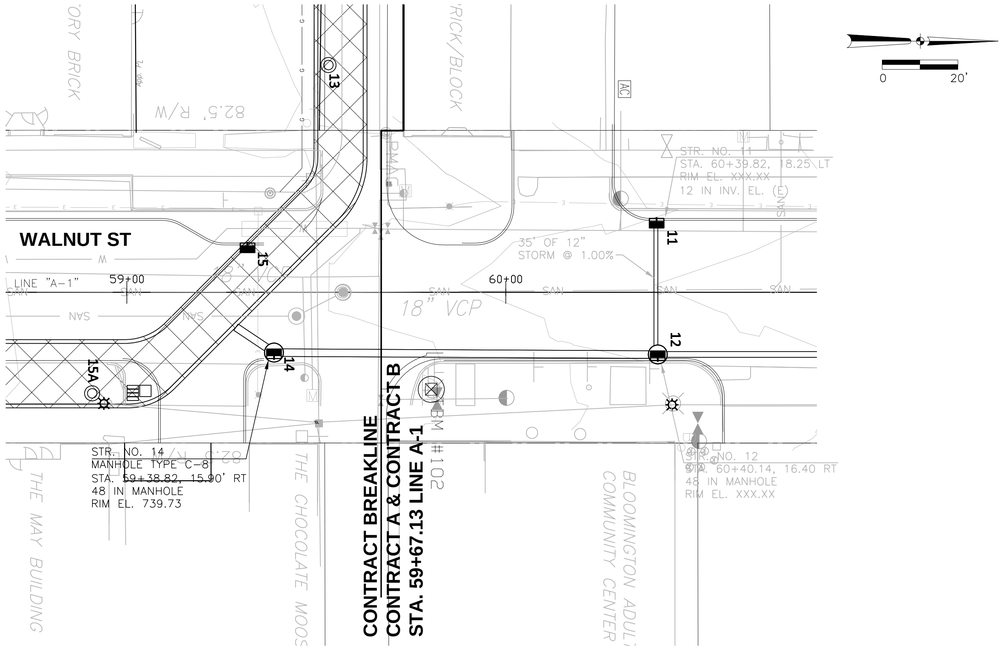
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED SANITARY SEWER & WATERMAIN

DONOHUE & ASSOCIATES

Sheet No. 23

Drawing No. **P11**



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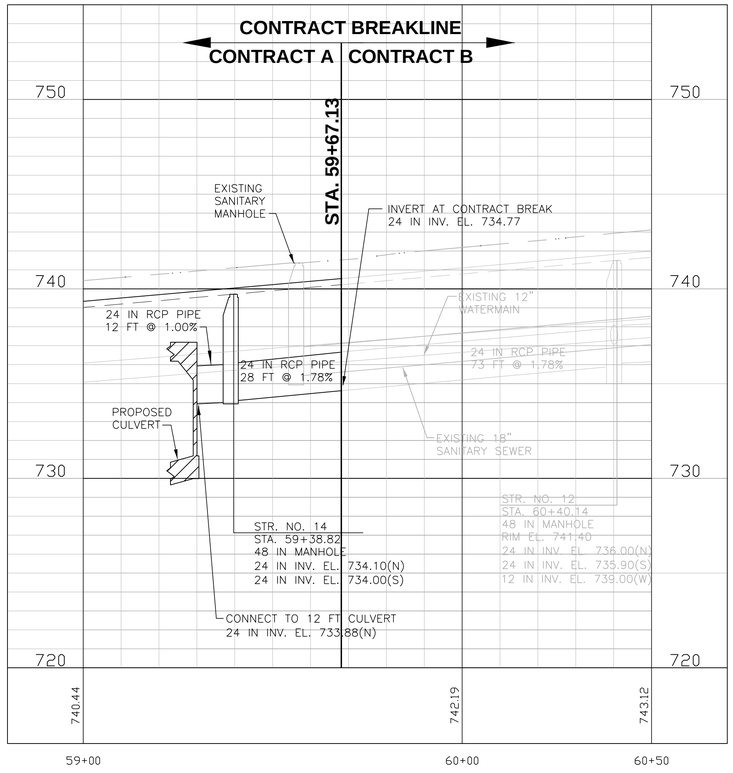

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PAUL N. ELLING
REGISTERED
NO.
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STATE OF
INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS & CULVERT

DONOHUE & ASSOCIATES

Sheet No. 24

Drawing No. **P12**

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) 9" PCCP FOR DRIVEWAY APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED PAVING

- (R1) 10" CONCRETE PAVEMENT OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) 12" #53 COMPACTED AGGREGATE
- (R3) NOT USED
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)

MISCELLANEOUS

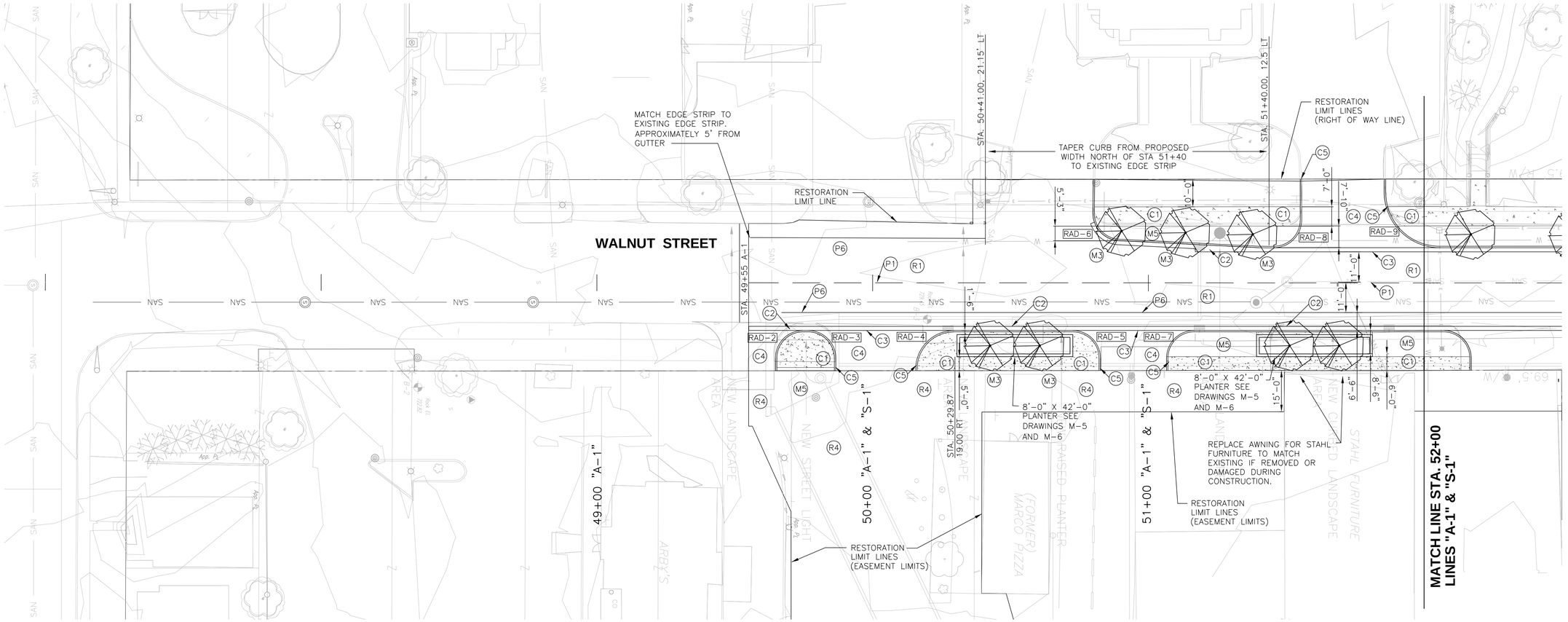
- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH

PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE A-1
5. ADJUST SIDEWALK GRADES AT ALL DRIVEWAY LOCATIONS TO SLOPE TO DRIVEWAY ELEVATION. SIDEWALK RAMPS MAY BE REQUIRED BUT ARE NOT SHOWN ON THE PLANS. A SLOPE NO MORE THAN OF 12:1 IS TO BE USED.
6. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.



CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-2	10.0	49+64.77, 27.50 RT	49+74.77, 17.50 RT
RAD-3	10.0	49+76.62, 17.50 RT	49+86.62, 27.50 RT
RAD-4	14.0	50+15.62, 31.50 RT	50+29.62, 17.50 RT
RAD-5	10.0	50+72.60, 17.50 RT	50+82.60, 27.50 RT
RAD-6	10.0	50+79.87, 25.18 LT	50+89.36, 15.04 LT
RAD-7	10.0	51+06.60, 27.50 RT	51+16.60, 17.50 RT
RAD-8	10.0	51+45.58, 12.50 LT	51+55.58, 22.67 LT
RAD-9	20.0	51+85.59, 32.50 LT	52+06.00, 12.50 LT

Revision Number	Revision Description	Drawn By	Checked By	Date

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Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 25

Drawing No. **SR1**

0 20'

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED PAVING

- (R1) 10" CONCRETE PAVEMENT OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) 12" #53 COMPACTED AGGREGATE
- (R3) NOT USED
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)

MISCELLANEOUS

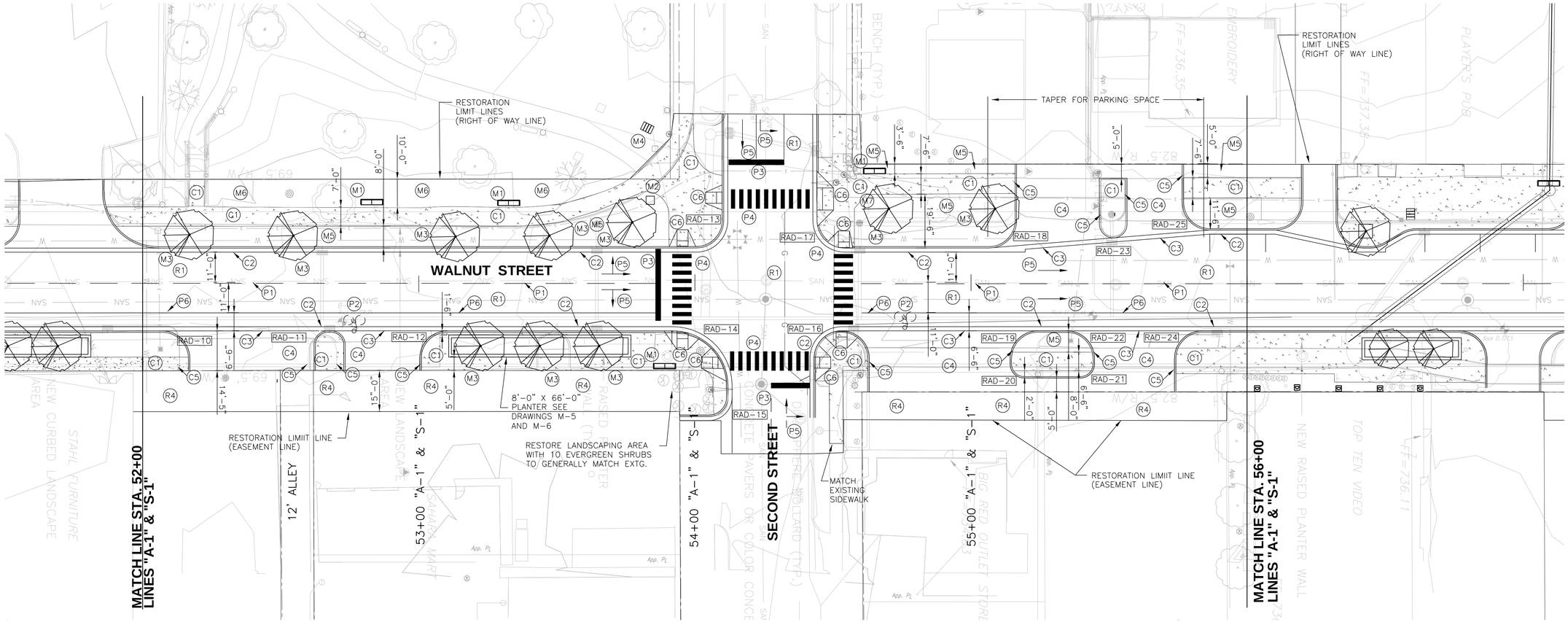
- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH
- (M7) TRAFFIC SIGNAL CONTROLLER CABINET SEE DWG TS-1

PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1"
5. ADJUST SIDEWALK GRADES AT ALL DRIVEWAY LOCATIONS TO SLOPE TO DRIVEWAY ELEVATION. SIDEWALK RAMPS MAY BE REQUIRED BUT ARE NOT SHOWN ON THE PLANS. A SLOPE NO MORE THAN OF 12:1 IS TO BE USED.
6. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.



CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-10	10.0	52+07.06, 17.50 RT	52+17.06, 27.50 RT
RAD-11	5.0	52+61.06, 22.50 RT	52+66.06, 17.50 RT
RAD-11A	5.0	52+67.36, 17.50 RT	52+72.36, 22.50 RT
RAD-12	10.0	53+00.36, 27.50 RT	53+10.36, 17.50 RT
RAD-13	10.0	54+00.41, 12.50 LT	54+10.41, 22.50 LT
RAD-14	20.0	53+91.65, 17.50 RT	54+11.97, 37.50 RT
RAD-15	7.0	54+11.97, 41.50 RT	54+04.97, 48.50 RT
RAD-16	10.0	54+43.16, 27.50 RT	54+53.16, 27.50 RT
RAD-17	10.0	54+44.23, 22.50 LT	54+54.23, 12.50 LT
RAD-18	10.0	55+06.49, 12.50 LT	55+16.49, 22.50 LT

CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-19	10.0	55+14.16, 27.50 RT	55+24.16, 17.50 RT
RAD-20	5.0	55+14.16, 29.55 RT	55+19.16, 34.55 RT
RAD-21	5.0	55+39.67, 34.55 RT	55+44.67, 29.55 RT
RAD-22	10.0	55+34.67, 17.50 RT	55+44.67, 27.50 RT
RAD-23	5.0	55+46.49, 20.57 LT	55+56.49, 21.16 LT
RAD-24	10.0	55+73.67, 27.50 RT	55+83.67, 17.50 RT
RAD-25	10.0	55+76.50, 29.00 LT	55+86.50, 19.00 LT

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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 26

Drawing No. **SR2**

0 20'

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED PAVING

- (R1) 10" CONCRETE PAVEMENT OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) 12" #53 COMPACTED AGGREGATE
- (R3) NOT USED
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)

MISCELLANEOUS

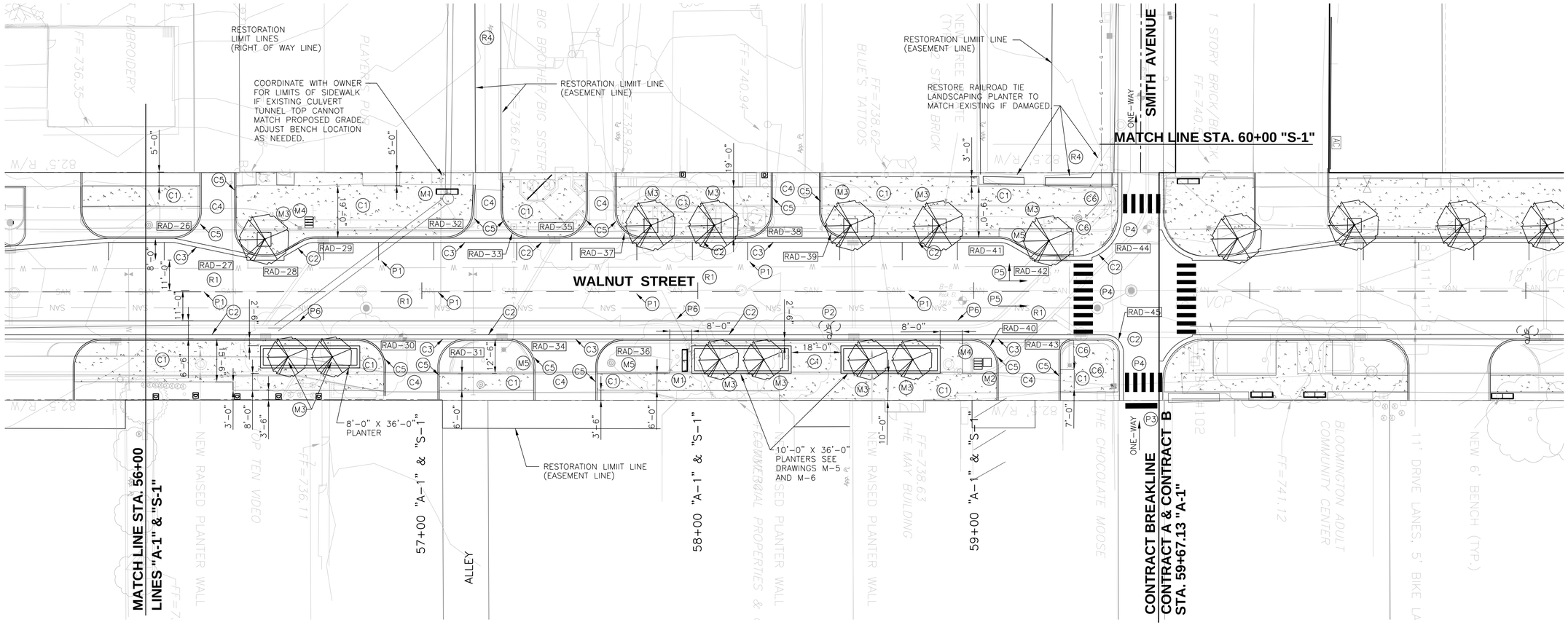
- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH

PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1"
5. ADJUST SIDEWALK GRADES AT ALL DRIVEWAY LOCATIONS TO SLOPE TO DRIVEWAY ELEVATION. SIDEWALK RAMPS MAY BE REQUIRED BUT ARE NOT SHOWN ON THE PLANS. A SLOPE NO MORE THAN OF 12:1 IS TO BE USED.
6. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.



CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-26	10.0	56+10.17, 19.00 LT	56+20.17, 29.00, LT
RAD-27	10.0	56+32.18, 22.50 LT	56+42.18, 12.50 LT
RAD-28	10.0	56+44.68, 12.50 LT	56+49.68, 13.84 LT
RAD-29	10.0	56+56.30, 17.66 LT	56+61.30, 19.00 LT
RAD-30	10.0	56+76.83, 17.50 RT	56+86.83, 27.50 RT
RAD-31	10.0	57+05.82, 27.50 RT	57+15.82, 17.50 RT
RAD-32	10.0	57+08.72, 19.00 LT	57+18.72, 29.00 LT
RAD-33	10.0	57+28.72, 29.00 LT	57+38.72, 19.00 LT
RAD-34	10.0	57+31.00, 17.50 RT	57+41.00, 27.50 RT
RAD-35	10.0	57+50.05, 19.00 LT	57+60.05, 29.00 LT

CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-36	10.0	57+63.01, 27.50 RT	57+73.01, 17.50 RT
RAD-37	10.0	57+70.05, 29.00 LT	57+80.05, 19.00 LT
RAD-38	10.0	58+17.06, 19.00 LT	58+27.06, 29.00 LT
RAD-39	10.0	58+44.06, 29.00 LT	58+54.06, 19.00 LT
RAD-40	10.0	58+98.86, 17.50 RT	59+08.86, 27.50 RT
RAD-41	10.0	59+09.14, 19.00 LT	59+14.14, 17.66 LT
RAD-42	10.0	59+20.76, 13.84 LT	59+25.76, 12.50 LT
RAD-43	5.0	59+30.86, 22.50 RT	59+35.86, 17.50 RT
RAD-44	15.0	59+37.18, 12.50 LT	59+52.18, 27.50 LT
RAD-45	5.0	59+47.72, 17.50 RT	59+52.72, 22.50 RT

CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-46	10.0	59+68.22, 32.50 RT	59+83.22, 17.50 RT
RAD-47	15.0	59+68.67, 27.50 LT	59+83.67, 12.50 LT

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Filename	246SR1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 27

Drawing No. **SR3**

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED PAVING

- (R1) 10" CONCRETE OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) 12" #53 COMPACTED AGGREGATE
- (R3) NOT USED
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)
- (R5) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER, 8" BITUMINOUS BASE, OVER 6" #53 COMPACTED AGGREGATE
- (R6) 1.5" BITUMINOUS SURFACE PER EASEMENT AGREEMENT

MISCELLANEOUS

- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH

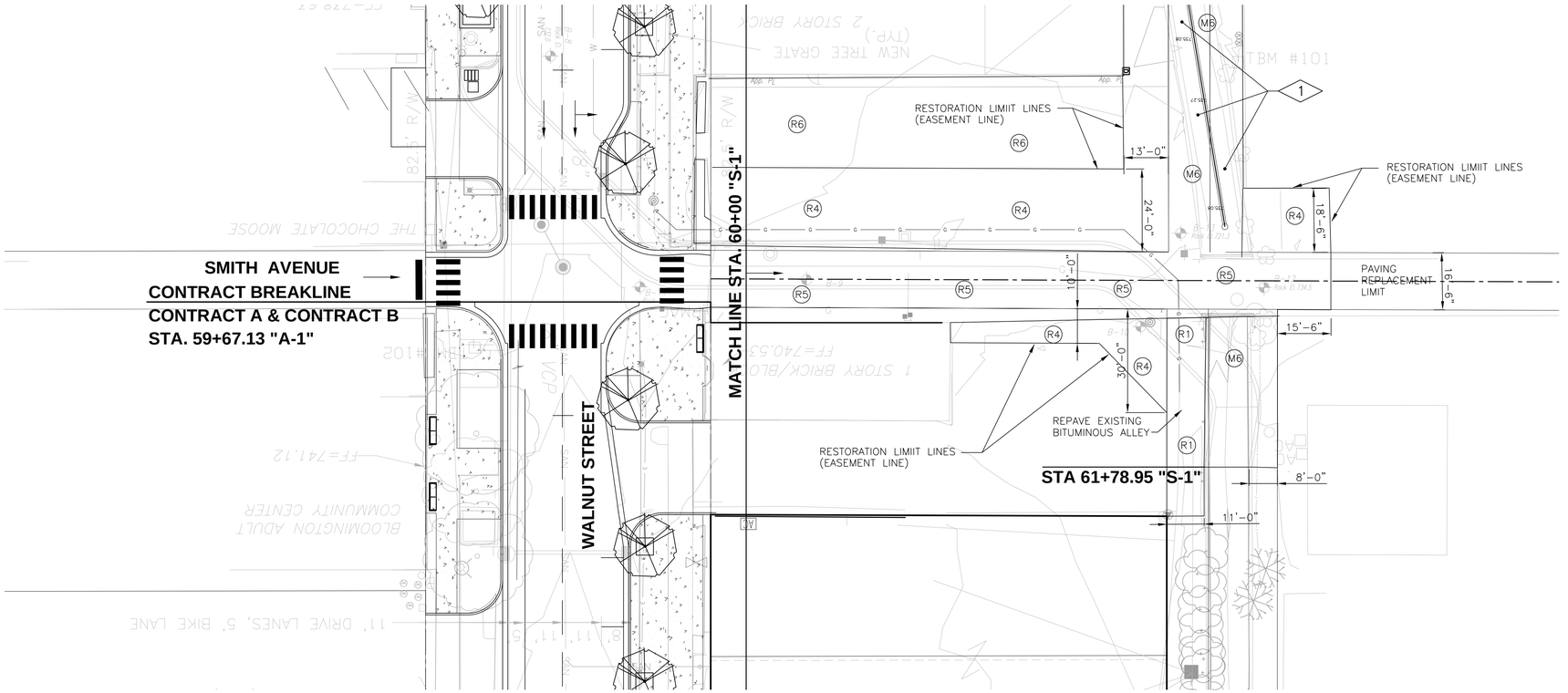
PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1".
6. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.

0 20'



GENERAL NOTES:

1. ALL DIMENSIONS REFERENCE RIGHT OF WAY OR EASEMENT LINES.

PLAN NOTES:

1. FILL UPPER 2 FT VOID WHERE STONE CULVERT WALL WAS REMOVED AND AND FILL OPEN CHANNEL WITH GRANULAR MATERIAL COMPACTED TO 100% STD PROCTOR. COORDINATE WITH PROPERTY OWNER TO DETERMINE IF UPPER 12" SHALL CONSIST OF INDOT #53 STONE OR 12" OF TOPSOIL.

Revision Number	Revision Description	Drawn By	Checked By	Date

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Project No.	11340&11721
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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 28

Drawing No. **SR4**

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED PAVING

- (R1) 10" CONCRETE PAVEMENT OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) 12" #53 COMPACTED AGGREGATE
- (R3) NOT USED
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)

MISCELLANEOUS

- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH

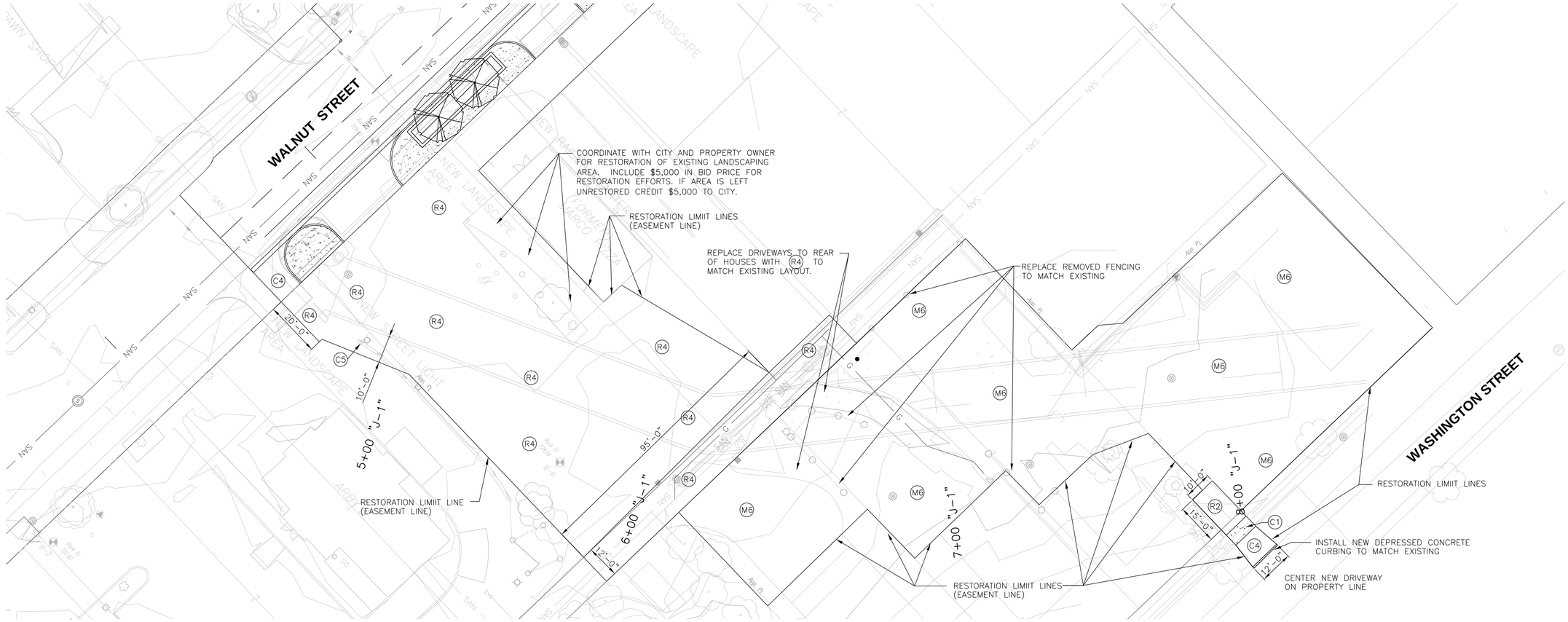
PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1"
6. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.

0 20'



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Checked By	TJM
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Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PLAN AND PROFILE
SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 29

Drawing No. **SR5**

PROPOSED MISCELLANEOUS CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP
- (C7) 7" THICK CONCRETE SIDEWALK SLAB

PROPOSED PAVING

- (R1) 10" CONCRETE PAVEMENT OVER 6" #53 COMPACTED AGGREGATE. REFER TO PJ DRAWINGS FOR JOINTING PATTERN
- (R2) BITUMINOUS LEVELING WEDGE BINDER (1.5" AVG)
- (R3) BITUMINOUS SURFACE 1.5"
- (R4) 1.5" BITUMINOUS SURFACE, 2.5" BITUMINOUS BINDER OVER 12" #53 COMPACTED AGGREGATE (PARKING AREA PAVING)
- (R5) 1.5" BITUMINOUS SURFACE PER EASEMENT AGREEMENT

MISCELLANEOUS

- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH

PROPOSED PAVEMENT MARKINGS

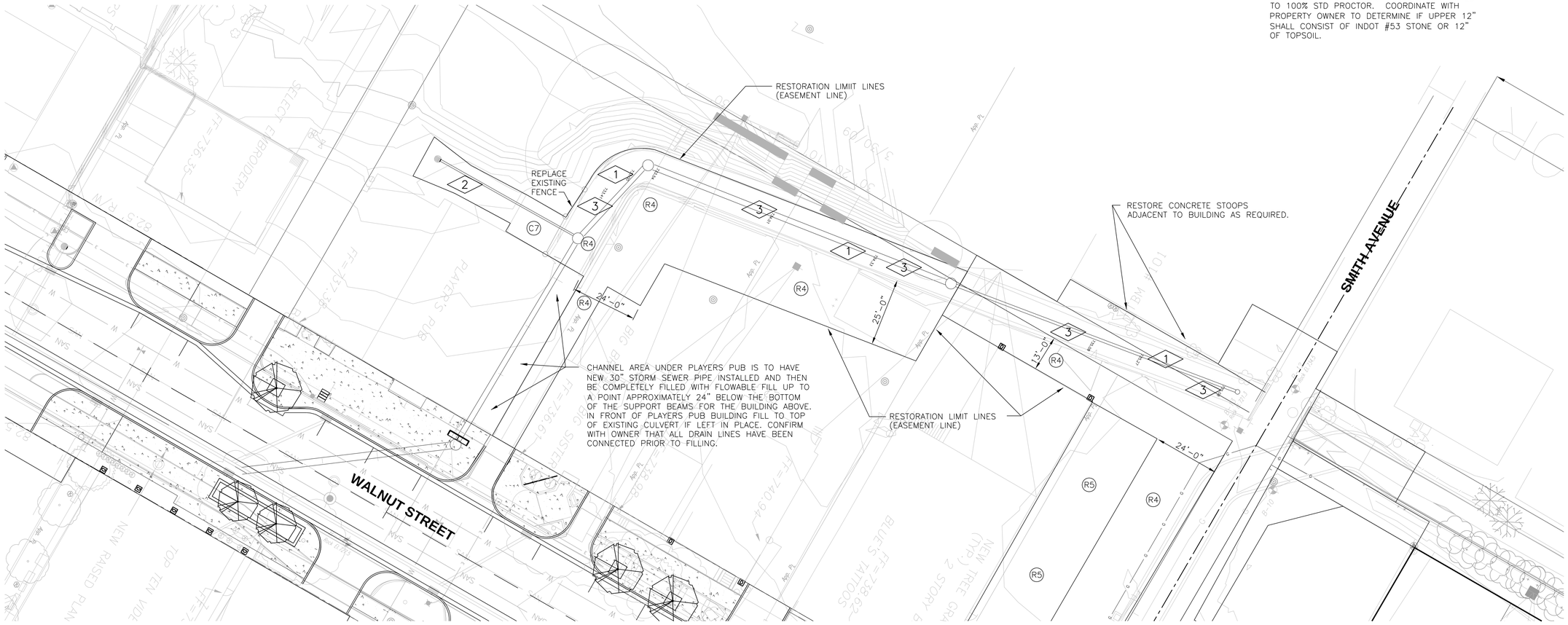
- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" WHITE THERMOPLASTIC LINES @ 36" CENTERS
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.

PLAN NOTES:

1. FINISHED GRADE ELEVATIONS OF CULVERT AREA SHALL MATCH EXISTING GRADES AT THE EDGES AND FORM A SHALLOW SWALE LEADING TO THE PROPOSED MANHOLES AND INLETS.
2. RESTORE DRIVEWAY AREA TO MATCH EXISTING CONDITIONS.
3. FILL UPPER 2 FT VOID WHERE STONE CULVERT WALL WAS REMOVED AND AND FILL OPEN CHANNEL WITH GRANULAR MATERIAL COMPACTED TO 100% STD PROCTOR. COORDINATE WITH PROPERTY OWNER TO DETERMINE IF UPPER 12" SHALL CONSIST OF INDOT #53 STONE OR 12" OF TOPSOIL.



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Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
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Revision Number | Revision Description | Drawn By | Checked By | Date

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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 30

Drawing No. **SR6**

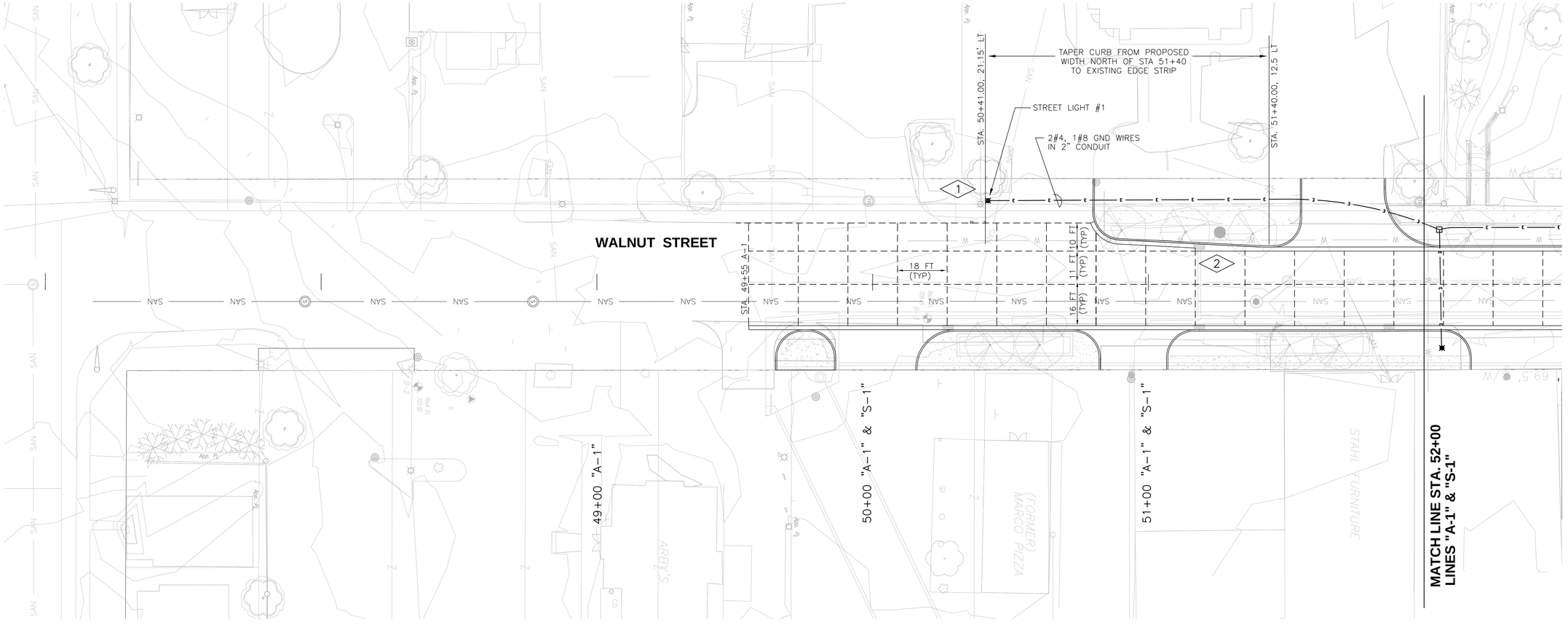
0 20'

PLAN NOTES:

1. STREET LIGHT TO BE MOUNTED ON STANDARD POLE BASE USING STANDARD BASE BOLT PATTERN. REFER TO DETAIL ON DWG M7.
2. WIDEN CURB GUTTER SECTION APPROXIMATELY 1 FOOT TO MATCH PAVEMENT JOINT PATTERN

GENERAL NOTES:

1. LONGITUDINAL JOINT FOR WALNUT STREET TO BE ON WALNUT CENTERLINE.
2. ALL TRANSVERSE JOINTS ARE AT 18 FT INTERVALS UNLESS NOTED OTHERWISE.
3. SECONDARY LONGITUDINAL JOINTS LOCATED AS SHOWN.
4. CONTRACTOR SHALL ADJUST JOINT SPACING AS NEEDED TO CONFORM TO FIELD CONDITIONS. MAX TRANSVERSE SPACING IS 18 FT. MAX LONGITUDINAL JOINT SPACING IS 16 FT.



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

STREET LIGHTING AND CONCRETE PAVEMENT JOINT PLAN

DONOHUE & ASSOCIATES

Sheet No. 31

Drawing No. **PJ1**

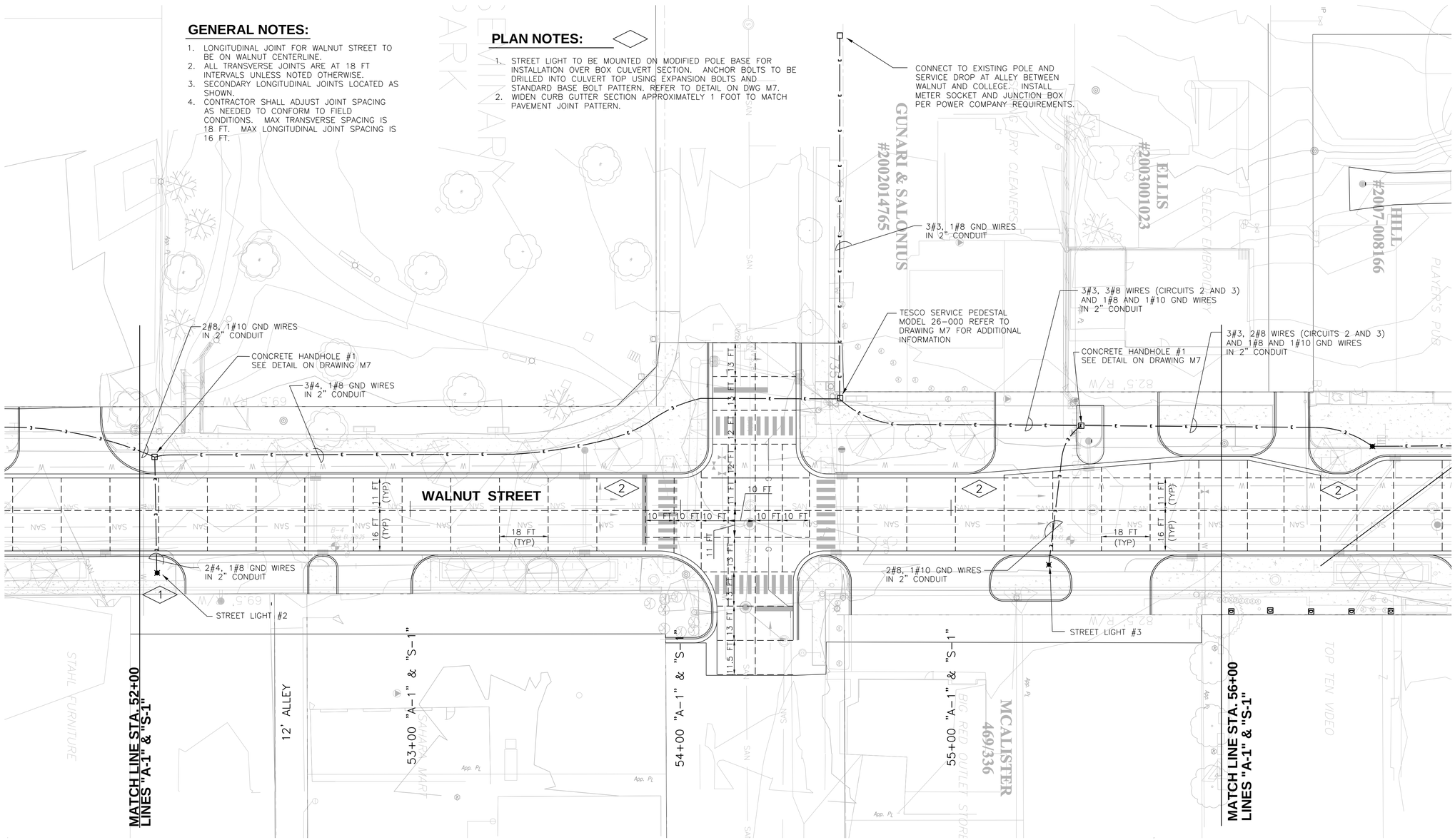
GENERAL NOTES:

1. LONGITUDINAL JOINT FOR WALNUT STREET TO BE ON WALNUT CENTERLINE.
2. ALL TRANSVERSE JOINTS ARE AT 18 FT INTERVALS UNLESS NOTED OTHERWISE.
3. SECONDARY LONGITUDINAL JOINTS LOCATED AS SHOWN.
4. CONTRACTOR SHALL ADJUST JOINT SPACING AS NEEDED TO CONFORM TO FIELD CONDITIONS. MAX TRANSVERSE SPACING IS 18 FT. MAX LONGITUDINAL JOINT SPACING IS 16 FT.

PLAN NOTES:

1. STREET LIGHT TO BE MOUNTED ON MODIFIED POLE BASE FOR INSTALLATION OVER BOX CULVERT SECTION. ANCHOR BOLTS TO BE DRILLED INTO CULVERT TOP USING EXPANSION BOLTS AND STANDARD BASE BOLT PATTERN. REFER TO DETAIL ON DWG M7.
2. WIDEN CURB GUTTER SECTION APPROXIMATELY 1 FOOT TO MATCH PAVEMENT JOINT PATTERN.

0 20'



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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

STREET LIGHTING AND CONCRETE PAVEMENT JOINT PLAN

DONOHUE & ASSOCIATES

Sheet No. 32

Drawing No. **PJ2**

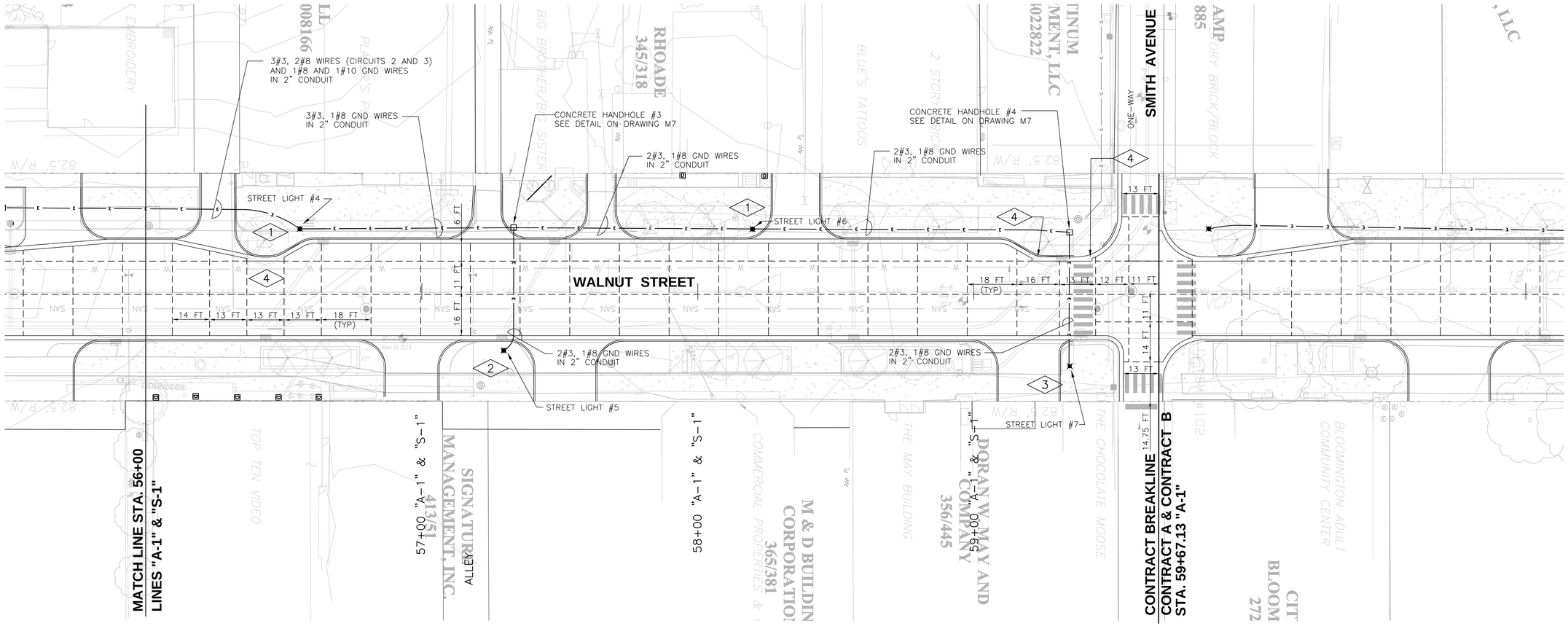
0 20'

PLAN NOTES:

1. STREET LIGHT TO BE MOUNTED ON STANDARD POLE BASE USING STANDARD BASE BOLT PATTERN. REFER TO DETAIL ON DWG M7.
2. STREET LIGHT TO BE MOUNTED ON MODIFIED POLE BASE FOR INSTALLATION OVER BOX CULVERT SECTION. ANCHOR BOLTS TO BE DRILLED INTO CULVERT TOP USING EXPANSION BOLTS AND STANDARD BASE BOLT PATTERN. REFER TO DETAIL ON DWG M7.
3. STREET LIGHT TO BE MOUNTED ON STANDARD POLE BASE USING STANDARD BASE BOLT PATTERN. REFER TO DETAIL ON DWG M7. CONSULT WITH ENGINEER FOR FINAL LOCATION OF THIS LIGHT DUE TO LIMITED AVAILABLE SPACE FOR INSTALLATION AND OVERHEAD LINES.
4. WIDEN CURB GUTTER SECTION APPROXIMATELY 1 FOOT TO MATCH PAVEMENT JOINT PATTERN

GENERAL NOTES:

1. LONGITUDINAL JOINT FOR WALNUT STREET TO BE ON WALNUT CENTERLINE.
2. ALL TRANSVERSE JOINTS ARE AT 18 FT INTERVALS UNLESS NOTED OTHERWISE.
3. SECONDARY LONGITUDINAL JOINTS LOCATED AS SHOWN.
4. CONTRACTOR SHALL ADJUST JOINT SPACING AS NEEDED TO CONFORM TO FIELD CONDITIONS. MAX TRANSVERSE SPACING IS 18 FT. MAX LONGITUDINAL JOINT SPACING IS 16 FT.



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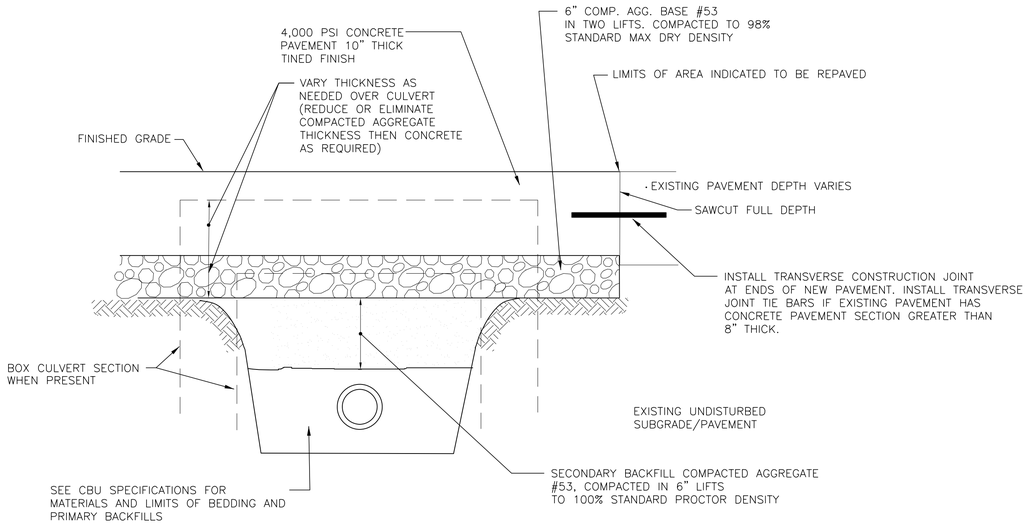
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

STREET LIGHTING AND CONCRETE PAVEMENT JOINTING PLAN

DONOHUE & ASSOCIATES

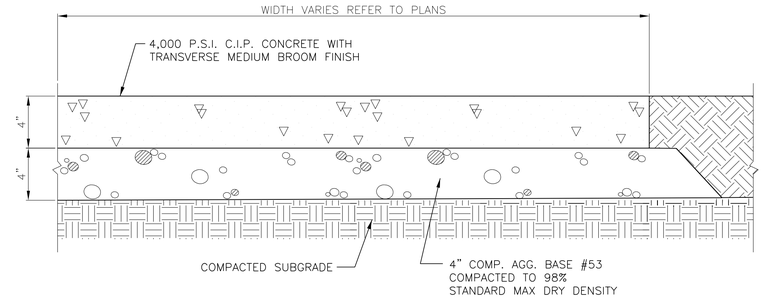
Sheet No. 33

Drawing No. **PJ3**



STREET RESTORATION R1

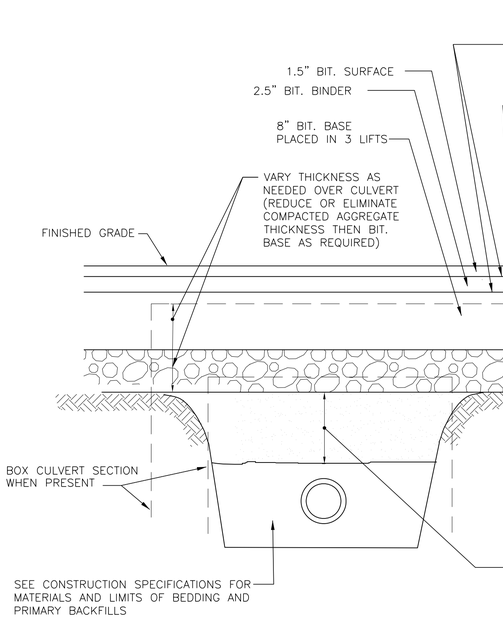
NTS



4" CONCRETE WALK FOR SIDEWALKS C1

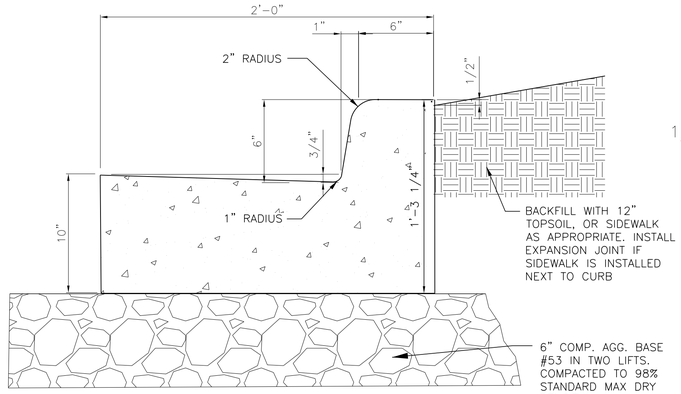
NTS

NOTES: SEE PLANS FOR LOCATIONS.
SIDEWALKS SHALL NOT EXTEND ACROSS DRIVEWAYS.



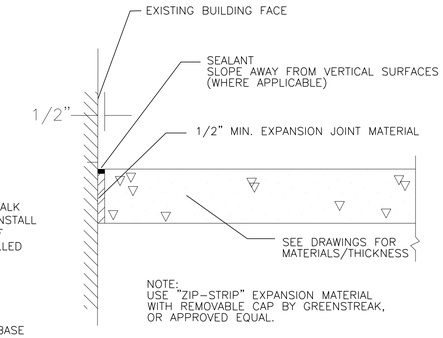
BITUMINOUS STREET RESTORATION R5

NTS



CONCRETE CURB AND GUTTER 2 FT C2

NTS



EXPANSION JOINT AT EXISTING BUILDINGS

NTS

THE FOLLOWING STANDARD DETAILS FROM THE CITY OF BLOOMINGTON UTILITIES CONSTRUCTION SPECIFICATIONS FOR WASTEWATER, WATER AND STORM PROJECTS ARE KNOWN TO BE NEEDED AND ARE SPECIFICALLY INCORPORATED INTO THESE DETAIL DRAWINGS (OTHERS MAY BE NEEDED IF SPECIFIC CIRCUMSTANCES WARRANT):

1. STANDARD SANITARY MANHOLE (STANDARD DETAIL 1)
2. EXTERNAL DROP PIPE DETAIL FOR SANITARY MANHOLE (STANDARD DETAIL 2)
3. STANDARD FIRE HYDRANT AND CONNECTION DETAIL (STANDARD DETAIL 8)
4. BEDDING AND BACKFILL DETAIL FOR PVC AND HDPE PIPE (STANDARD DETAIL 11)
5. BEDDING AND BACKFILL DETAIL FOR ALL RIGID PIPES (STANDARD DETAIL 12)
6. STANDARD SANITARY LATERAL CLEANOUT FOR 4" AND 6" PIPES (STANDARD DETAIL 19)

THE FOLLOWING STANDARD DRAWINGS FROM THE INDIANA DEPARTMENT OF TRANSPORTATION ARE KNOWN TO BE NEEDED AND ARE SPECIFICALLY INCORPORATED INTO THESE DETAIL DRAWINGS (OTHERS MAY BE NEEDED IF SPECIFIC CIRCUMSTANCES WARRANT):

1. INLET TYPE A (STANDARD DRAWING E 720-INST-01)
2. INLET TYPE J (STANDARD DRAWING E 720-INST-06)
3. INLET TYPE M (STANDARD DRAWING E 720-INST-07)
4. FLAT TOP GRATE CASTING TYPE 2 (STANDARD DRAWING E 720-MHCA-01)
5. SOLID MANHOLE CASTING TYPE 4 (STANDARD DRAWING E 720-MHCA-02)
6. BEEHIVE CASTING TYPE 7 (STANDARD DRAWING E 720-EDCA-01)
7. CURB AND GUTTER CASTING TYPE 8 (STANDARD DRAWINGS E 720-ICCA-04, -05, -06)
8. CURB AND GUTTER CASTING TYPE 10 (STANDARD DRAWINGS E 720-ICCA-08, -09, -09A)
9. CONCRETE PAVEMENT LONGITUDINAL JOINT (STANDARD DRAWING E 503-CCPJ-02)
10. CONCRETE PAVEMENT TRANSVERSE CONSTRUCTION JOINT (STANDARD DRAWING E 503-CCPJ-05)
11. CONCRETE PAVEMENT LONGITUDINAL CONSTRUCTION JOINT (STANDARD DRAWING E 503-CCPJ-07)
12. ALL CONSTRUCTION SIGNS AND CONSTRUCTION ZONE SIGN PLACEMENT DRAWINGS
13. APPROPRIATE DRIVEWAY AND ENTRANCE DRAWINGS
14. APPROPRIATE CURB RAMP DRAWINGS

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PAUL N. ELLING
REGISTERED
NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

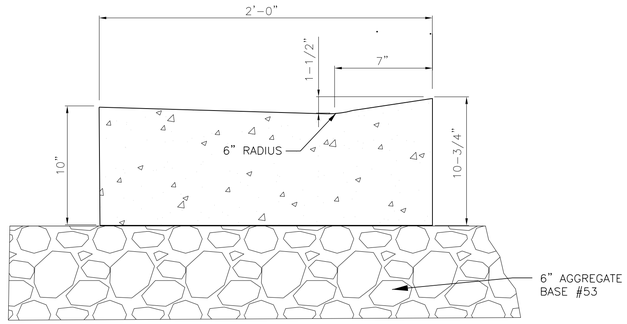
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
PAVING, CURB, SIDEWALK DETAILS

DONOHUE & ASSOCIATES

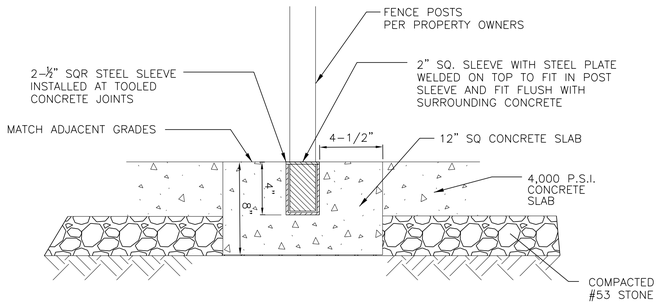
Sheet No. 34

Drawing No. **M1**



DEPRESSED CONCRETE CURB AND GUTTER 2 FT C3

NTS



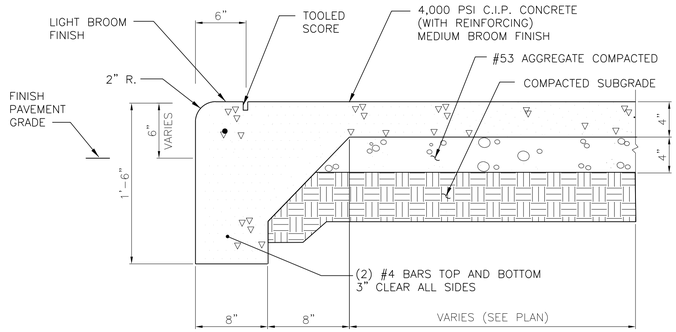
PLACE 12" CONCRETE SQUARES WHERE WHERE FENCE SLEEVES WILL BE USED. COORDINATE WITH PROPERTY OWNER.

OUTDOOR DINING FENCE INSERTS

NTS

FENCE INSERT NOTES:

1. CONTRACTOR TO INSTALL 2-½" SQR STEEL SLEEVES IN CONCRETE AS SHOWN.
2. CONTRACTOR TO COORDINATE LOCATION AND SPACING OF INSERTS WITH PLAYERS PUB PROPERTY OWNER FOR FENCE SPACING.
3. CONTRACTOR TO FURNISH 2" SQR STEEL INSERT FOR EACH POST SLEEVE. INSERTS WILL BE GIVEN TO PROPERTY OWNERS FOR THEIR USE IN CLOSING HOLES WHEN FENCE IS NOT BEING USED. CONTRACTOR SHALL ENSURE A PROPER FIT OF EACH INSERT PRIOR TO TURN OVER TO PROPERTY OWNER.

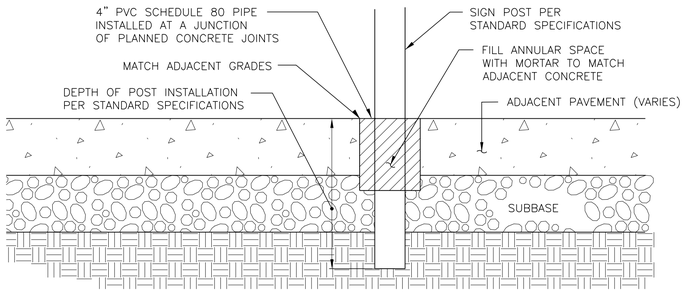


C1 AND C5 RESTORATION NEXT TO EACH OTHER AS INTEGRAL UNIT C1 AND C5

NTS

NOTES:

1. HAND FINISH CURB TO A 6" DEPTH (TYP.).
2. THIS DETAIL TO BE USED WHERE CONCRETE WALKS C1 ARE TO BE RECONSTRUCTED NEXT TO NEW BARRIER CURBS C5 AS SHOWN ON SURFACE RESTORATION DETAILS.

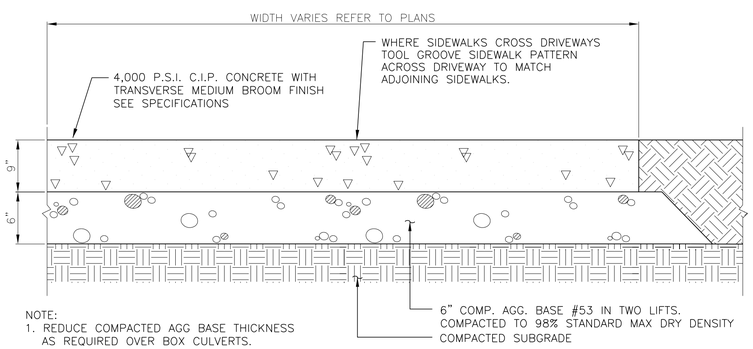


SIGN INSTALLATIONS IN SIDEWALKS

NTS

SIGN RELOCATION NOTES:

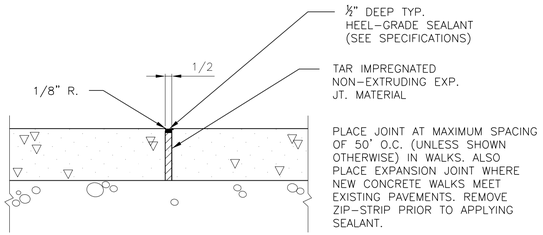
1. CONTRACTOR WILL COORDINATE WITH CITY TO HAVE EXISTING SIGNS REMOVED AT APPROPRIATE TIMES.
2. CONTRACTOR TO INSTALL PVC INSERTS AS SHOWN FOR OWNER'S USE IN REINSTALLING SIGNS.
3. ALL EXISTING SIGNS WILL BE RESET BY OWNER IN CONTRACTOR PROVIDED INSERTS UNLESS SHOWN OTHERWISE. NEW SIGNS WILL BE PROVIDED BY THE OWNER.



NOTE:
1. REDUCE COMPACTED AGG BASE THICKNESS AS REQUIRED OVER BOX CULVERTS.

9" CONCRETE PAVEMENT FOR DRIVES AND ALLEYS C4

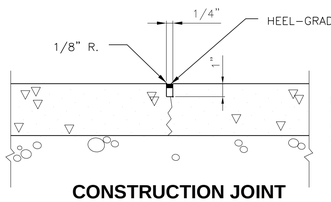
NTS



PLACE JOINT AT MAXIMUM SPACING OF 50' O.C. (UNLESS SHOWN OTHERWISE) IN WALKS. ALSO PLACE EXPANSION JOINT WHERE NEW CONCRETE WALKS MEET EXISTING PAVEMENTS. REMOVE ZIP-STRIP PRIOR TO APPLYING SEALANT.

EXPANSION JOINT

NOTE:
EXPANSION JOINT MATERIAL SHALL BE "ZIP-STRIP" EXPANSION MATERIAL WITH REMOVABLE CAP BY GREENSTREAK OR APPROVED EQUAL.

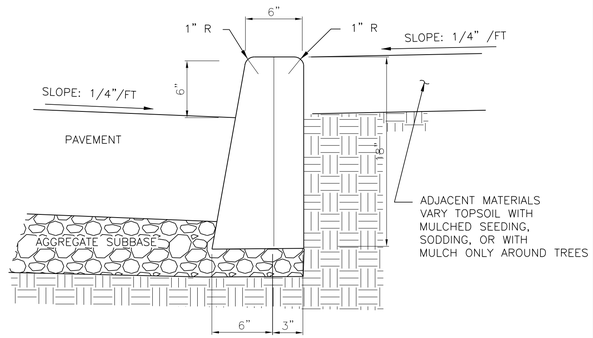


PLACE JOINT AT MAXIMUM SPACING OF 5' O.C. IN WALKS (UNLESS SHOWN OTHERWISE) WITHIN EACH LENGTH OF WALK, MAKE SPACES EQUAL.

CONSTRUCTION JOINT

JOINTING IN WALKS

NTS



6" CONCRETE BARRIER CURBS WITH TURF BACK OF CURB C5

NTS

NOTE: SEE PLANS FOR LOCATIONS.

NOTES:

1. DETAIL SHOWN HERE APPLIES WHEN NEW DRIVEWAY OR ALLEY CURB IS TO BE CONSTRUCTED WITHOUT AN ADJACENT SIDEWALK.
2. USE INTEGRAL CURB & WALK DETAIL INSTEAD IF AN ADJACENT SIDEWALK MUST ALSO BE REPLACED.

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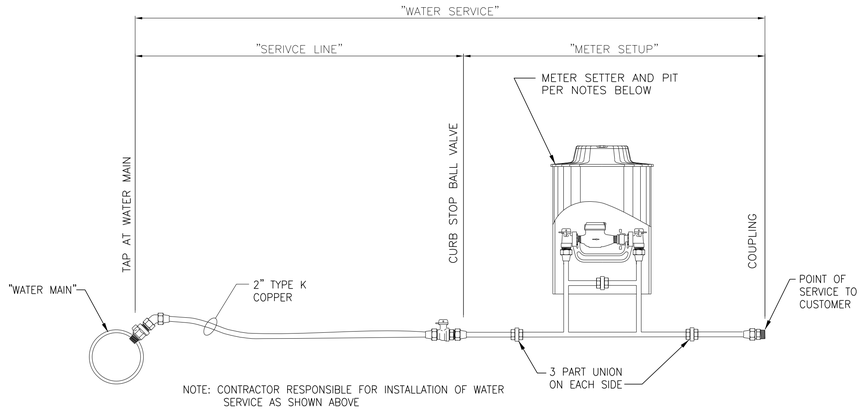
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
SIDEWALK AND CURB DETAILS

DONOHUE & ASSOCIATES

Sheet No. 35

Drawing No. **M2**



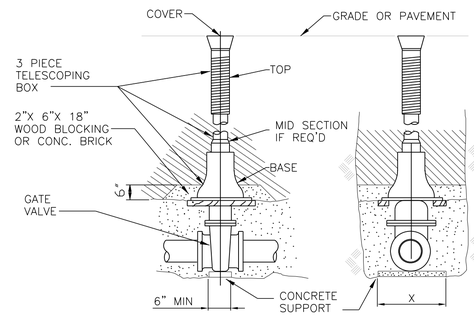
SEE PLANS FOR
METER PIT LOCATIONS
"M" – METER SYMBOL

METER SETTER / PIT NOTES

1. METER SETTER SHALL BE: FORD 2" COPPER SETTER (CATALOG #VBHH77-21HBHC-11-77) AND INCLUDE HIGH BYPASS LINE PER MANUFATURER.
2. TOP OF YOKE TO BE SET MIN. 18" AND MAX 24" BELOW SURFACE GRADE.
3. METER PITS BY WATERWORKS 30"x30" PLASTIC WITH (CBU IIJ-7) EXTENSION RING 20"x30" (FORD FL-30) AND (CBU IIJ-109) ROUND PIT RING AND #10 LID (FORD #10 LID AND RING) ALL METER LIDS TO BE 20" IN DIAMETER.
4. CBU TO INSTALL METER ONCE SETTER AND PIT ARE INSTALLED BY CONTRACTOR.

TYPICAL 2" WATER SERVICE DETAIL

NTS

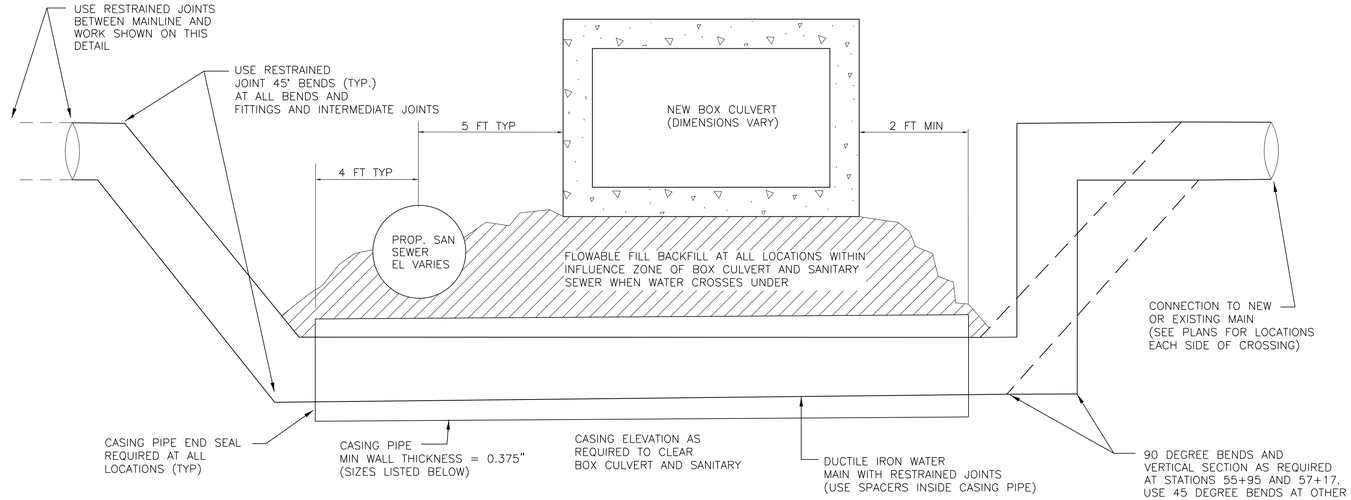


PIPE DIA. INCHES	X=SETTING INCHES
2	6
3	8
4	8
6	12
8	12
10	16

SIDE VIEW FRONT VIEW

GATE VALVE IN A BOX DETAIL C405

NTS



WATER MAIN MATERIAL:
ALL WATER MAINS SHALL BE CLASS 350 DUCTILE IRON PIPE FOR 12" AND LESS AND CLASS 250 FOR LARGER SIZES.

WATERMAIN CROSSING LAYOUT

NTS

THIS DETAIL APPLIES TO RELOCATED WATER MAIN CROSSINGS UNDER BOX CULVERTS. NOT ALL CROSSINGS HAVE SANITARY SEWER ALSO. SIZES OF MAINS AND CASINGS ARE AS FOLLOWS:

1. 8" CLASS 350 DIP WATERMAIN IN 30' OF 20" STEEL CASING PIPE (STA. 54+15)
2. 8" CLASS 350 DIP WATERMAIN IN 30' OF 20" STEEL CASING PIPE (STA. 55+95)
3. 12" CLASS 350 DIP WATERMAIN IN 28' OF 24" STEEL CASING PIPE (STA. 56+60 TO 56+88)
4. 8" CLASS 350 DIP WATERMAIN IN 30' OF 20" STEEL CASING PIPE (STA. 57+17)
5. 12" CLASS 350 DIP WATERMAIN IN 28' OF 24" STEEL CASING PIPE (STA. 59+30 TO 59+58)

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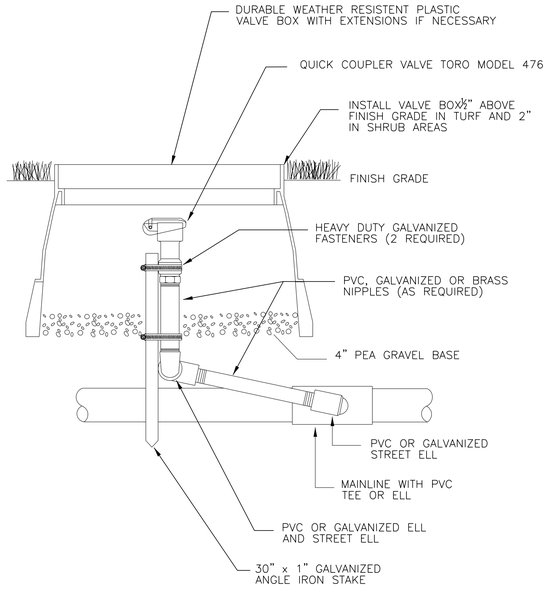
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
WATER DETAILS

DONOHUE & ASSOCIATES

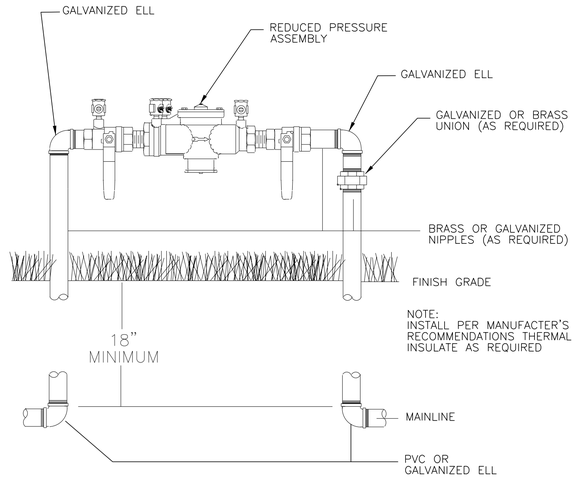
Sheet No. 36

Drawing No. **M3**



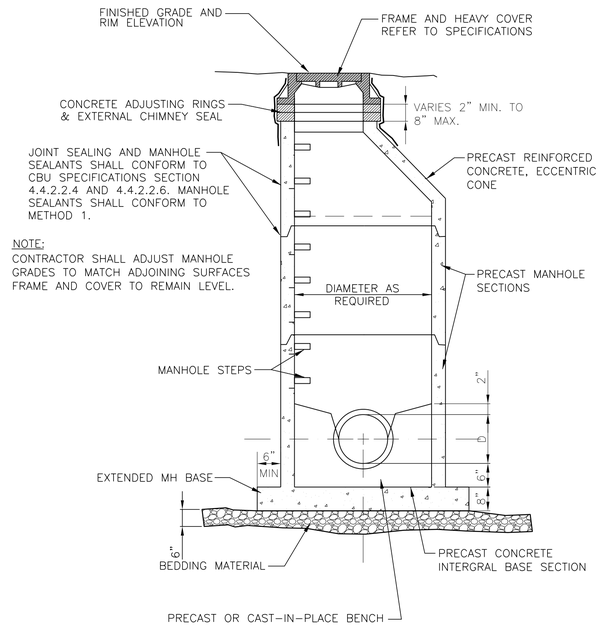
IRRIGATION SYSTEM QUICK COUPLER VALVE

NTS



REDUCED PRESSURE ASSEMBLY FOR BACKFLOW PREVENTION

NTS

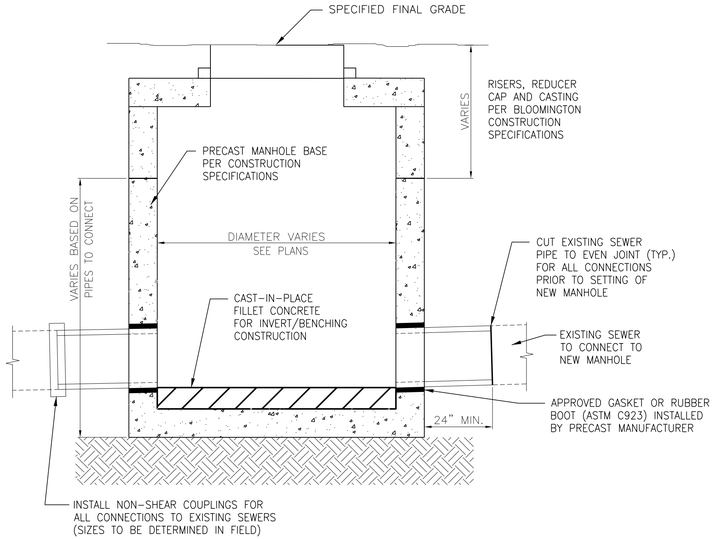


STANDARD SANITARY MANHOLE DETAIL

NTS

IRRIGATION SYSTEM NOTES:

1. THE IRRIGATION SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE OF 65 PSI, @ THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT DIFFERENCES BETWEEN REQUIREMENTS AND ACTUAL READINGS TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
2. INSTALL ALL BACKFLOW PREVENTION DEVICES AND ALL PIPING BETWEEN THE POINT OF CONNECTION AND THE BACKFLOW PREVENTER AS PER LOCAL CODES.
3. FINAL LOCATION OF THE BACKFLOW PREVENTER SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PER LOCAL CODES.
4. A BLOW-OUT VALVE SHALL BE LOCATED AT THE IRRIGATION WATER SUPPLY POINT OF CONNECTION TO PROVIDE FOR A POINT OF INJECTION OF COMPRESSED AIR TO PURGE THE SYSTEM OF RETAINED WATER FOR WINTERIZATION. THE BLOW-OUT VALVE CONNECTION SHALL BE LOCATED NEAR THE BACKFLOW PREVENTER.
5. QUICK COUPLING VALVES SHALL BE MOUNTED ON A 1" LASCO BRASS INSERT SWING JOINT WITH STABILIZING ELBOW.
6. ALL MAINLINE PIPING UNDER ROAD PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES (MIN. SDR 26 PVC). ONLY PIPING IN PLANTERS AND UNDER SIDEWALKS MAY BE UNSLEEVED. SLEEVES SHALL BE A MINIMUM OF TWICE (2X) THE OUTSIDE DIAMETER OF THE PIPE TO BE SLEEVED.
7. IRRIGATION PIPE SIZE SHALL CONFORM TO THOSE SHOWN ON DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED. SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. MINIMUM PIPE SHALL BE 2".
8. IRRIGATION PIPE MAY BE INSTALLED WITH DIRECTION DRILL OR OPEN CUT AND SHALL BE INSTALLED WITH A MINIMUM OF 18" COVER.
9. ALL PIPES AND FITTINGS SHALL BE SCHEDULE 40 PVC.
10. ALL QUICK COUPLERS SHALL BE INSTALLED IN LOCKABLE VALVE BOXES.
11. THE IRRIGATION CONTRACTOR SHALL WARRANTY THE SYSTEM FOR ONE FULL YEAR FROM THE DATE OF ACCEPTANCE AND PROVIDE THE FIRST YEAR WINTERIZATION AND FOLLOWING YEAR START-UP AFTER THE SYSTEM IS COMPLETED.
12. THE IRRIGATION CONTRACTOR SHALL CONDUCT A TRAINING SESSION WITH THE OWNER'S REPRESENTATIVE TO DEMONSTRATE THE OPERATION OF THE SYSTEM AND IDENTIFY OPERATIONAL SETTINGS AND ADJUSTMENTS.
13. THE IRRIGATION CONTRACTOR SHALL PROVIDE 'AS-BUILT' DRAWINGS OF THE INSTALLATION TO THE OWNER IN PDF FORMAT AND PRINTED COPY AT THE SCALE OF THE ORIGINAL CONSTRUCTION DOCUMENTS.



INSTALLATION OF NEW MANHOLES OVER EXISTING SEWER

NTS

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR ANY BYPASS PUMPING REQUIRED.
2. CONTRACTOR TO FIELD VERIFY EXISTING GRADES, CONNECTION SIZES, EXISTING PIPE INVERTS AND EXISTING PIPE MATERIALS PRIOR TO ORDERING PRECAST STRUCTURE.
3. CONTRACTOR TO PROVIDE CBU APPROVED NON-SHEAR COUPLINGS OR OTHER ACCEPTABLE PIPE CONNECTIONS FOR SIMILAR OR NON SIMILAR PIPE MATERIALS.
4. PRE-INSTALLED SEWER PIPE STUBS TO BE ASTM D-3034 OR ASTM F679 AS APPLICABLE.
5. MANHOLE SHALL CONFORM IN ALL OTHER RESPECTS TO CBU SPECIFICATIONS.

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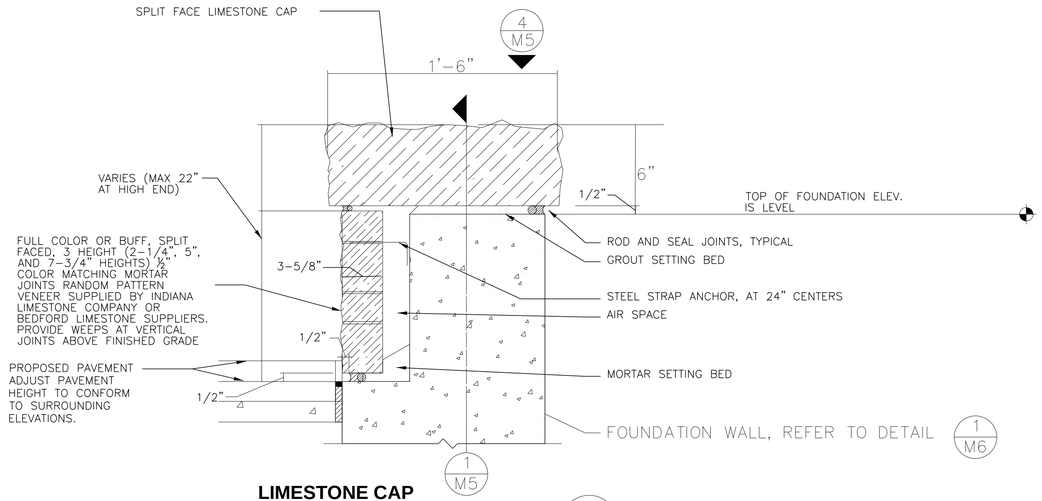
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
IRRIGATION, HANDICAPPED SYMBOL, NEW MANHOLE DETAIL

DONOHUE & ASSOCIATES

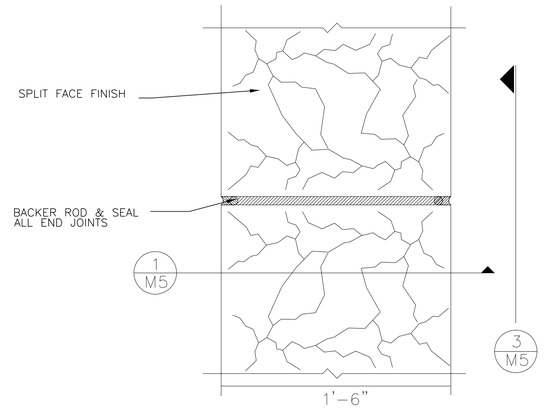
Sheet No. 37

Drawing No. **M4**



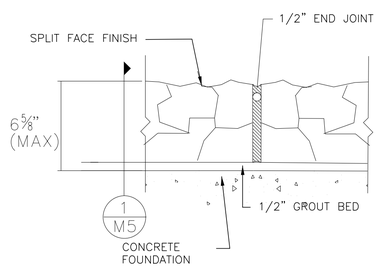
LIMESTONE CAP AND VENEER SECTION — **1 M5**

NTS



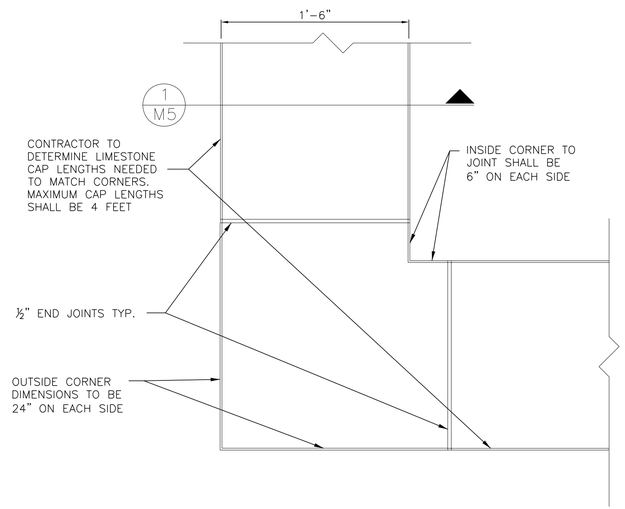
PARTIAL PLAN WALL CAP JOINTING — **2 M5**

NTS



ELEVATION OF WALL CAPS — **3 M5**

NTS



PLAN OF WALL CAP TYPICAL CORNER PIECE — **4 M5**

NTS

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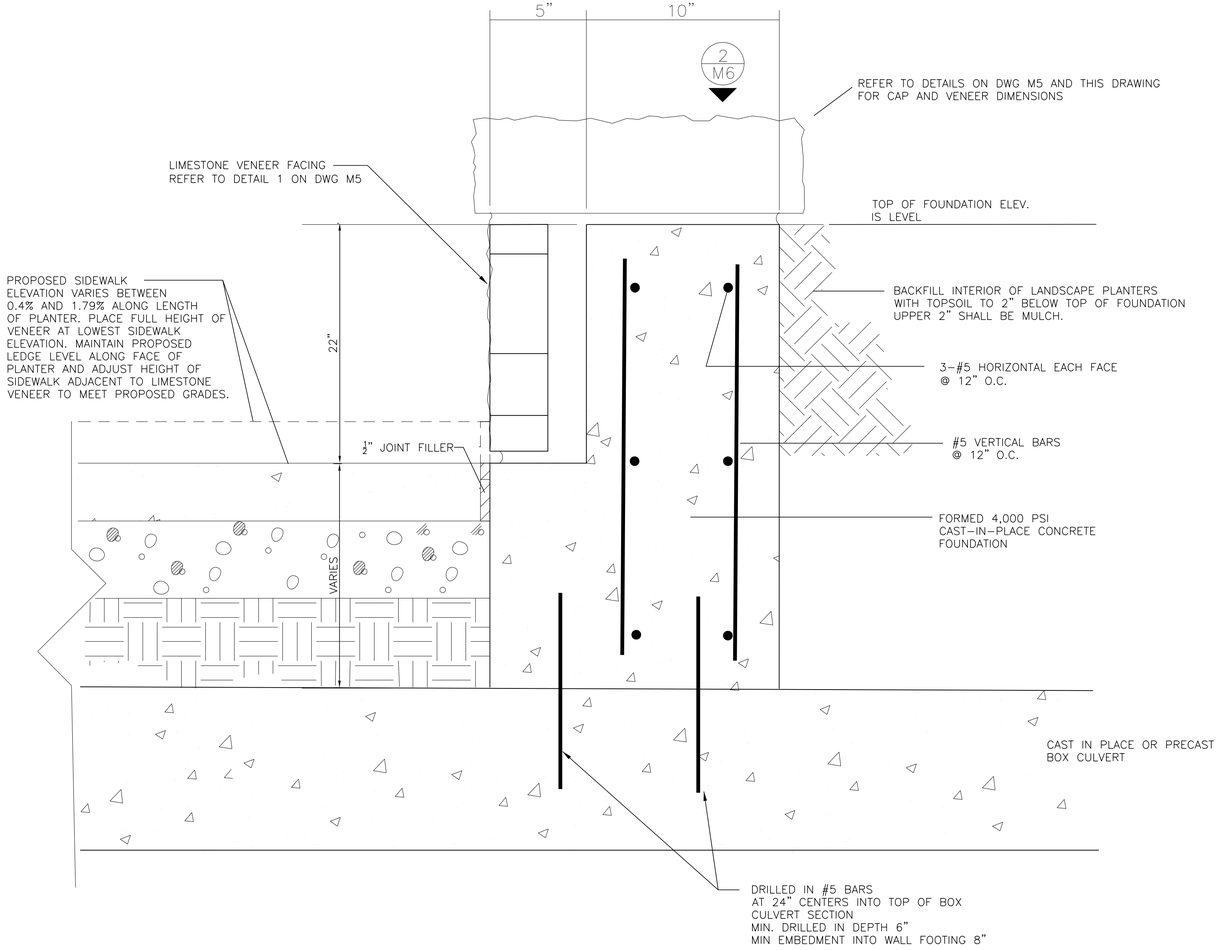
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
LANDSCAPING PLANTER DETAILS

DONOHUE & ASSOCIATES

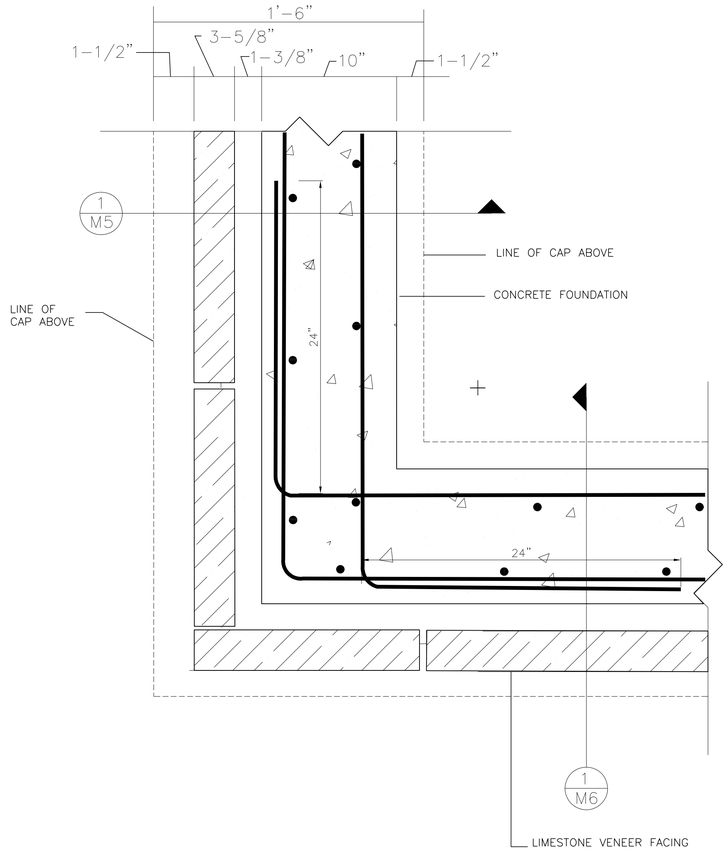
Sheet No. 38

Drawing No. **M5**



WALL FOOTING AND FOUNDATION SECTION — 1 / M6

NTS



HORIZONTAL SECTION OF PLANTER CORNER CONDITION — 2 / M6

NTS

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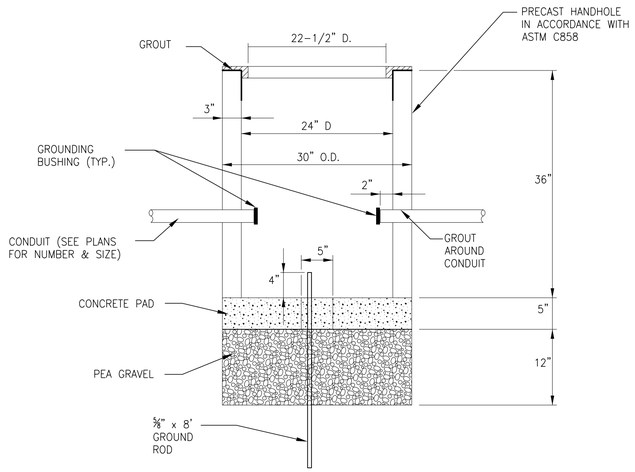
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
LANDSCAPING PLANTER DETAILS

DONOHUE & ASSOCIATES

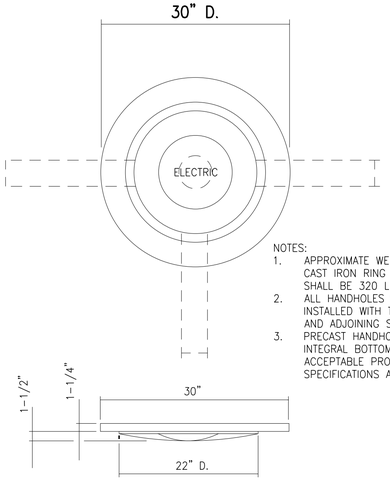
Sheet No. 39

Drawing No. **M6**

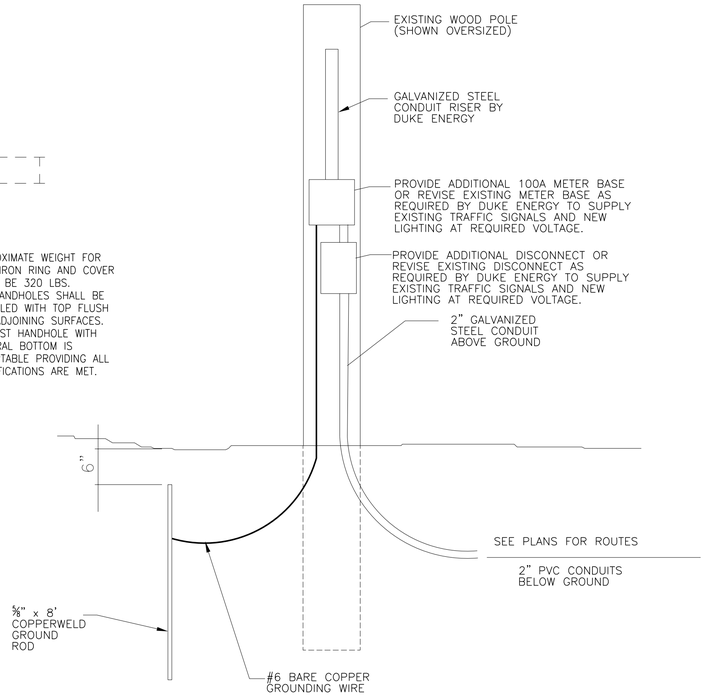


STREET LIGHTING HANDHOLE

NTS



NOTES:
1. APPROXIMATE WEIGHT FOR CAST IRON RING AND COVER SHALL BE 320 LBS.
2. ALL HANDHOLES SHALL BE INSTALLED WITH TOP FLUSH AND ADJOINING SURFACES.
3. PRECAST HANDHOLE WITH INTEGRAL BOTTOM IS ACCEPTABLE PROVIDING ALL SPECIFICATIONS ARE MET.



SERVICE POINT NOTES:

1. CONTRACTOR SHALL PROVIDE NECESSARY MATERIALS FOR MOUNTING ELECTRICAL EQUIPMENT TO EXISTING WOOD POLE.
2. THE SERVICE POINT FOR THE NEW LIGHTS ALREADY HAS A METER AND DISCONNECT FOR 120v SERVICE FOR THE TRAFFIC SIGNALS ON SECOND STREET AT COLLEGE AND WALNUT. CONTRACTOR TO COORDINATE WITH DUKE TO MAINTAIN SERVICE TO EXISTING SIGNALS.
2. THIS DETAIL FOR CONCEPTUAL USE ONLY. CONTRACTOR SHALL COORDINATE THE REQUIREMENTS IN THESE PLANS AND SPECIFICATIONS WITH THE EQUIPMENT THEY INTEND TO USE AND ARE TO SUBMIT A SERVICE POINT LAYOUT DRAWING FOR REVIEW BY DUKE ENERGY.

LIGHTING REMOVAL CONTINUITY:

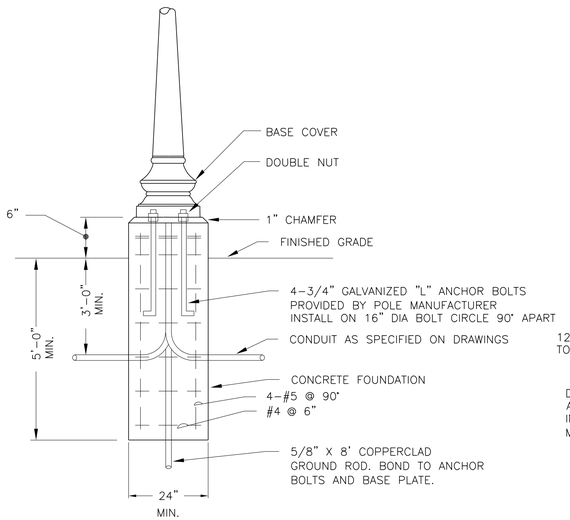
CONTRACTOR TO COORDINATE WITH DUKE ENERGY TO HAVE EXISTING LIGHTS REMOVED AT APPROPRIATE TIME FOR EACH BLOCK. COORDINATE LIGHTING REMOVAL WITH CITY TO MINIMIZE DURATION OF TIME WHEN NO LIGHTING IS PROVIDED.

LIGHTING SERVICE PEDESTAL:

SERVICE PEDESTAL SHALL BE TESCO CONTROLS MODEL 26-000, OR EQUAL, SUITABLE FOR 100 AMP 240 VOLT SERVICE. METER SOCKET NOT REQUIRED IF METER INSTALLED AT SERVICE POINT. CIRCUITS TO BE AS SHOWN IN TABLE BELOW. SERVICE PEDESTAL TO CONTAIN LIGHTING CONTACTOR AND PHOTOCELL CONTROLS FOR ALL LIGHTING CIRCUITS. CABINET SHALL BE HOT DIPPED GALVANIZED STEEL FINISHED OR PAINTED IN COLOR SELECTED BY CITY. ENCLOSURE DOOR SHALL BE HINGED WITH PADLOCKABLE LATCH AND NO EXPOSED NUTS, BOLTS, SCREWS, OR OTHER FASTENERS.

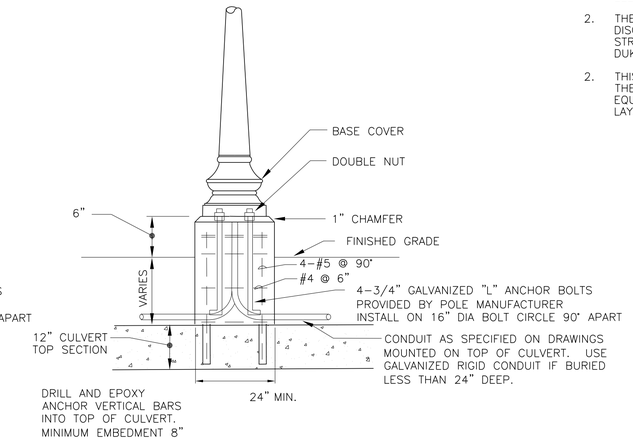
CONDUIT INSTALLATION NOTES:

1. ALL CONDUITS ARE TO BE 2" PVC SCH. 80 AND ARE TO BE BURIED 36" DEEP. ADVISE ENGINEER IF DIFFERENT DEPTS REQUIRED DUE TO CONFLICTS.
2. LIGHTING CIRCUITS TO BE LABELED ACCORDING TO PHASE AND CIRCUIT NUMBER AT EACH LIGHT POLE.
3. SEE PLANS FOR LOCATIONS OF CONDUIT.



STANDARD LIGHT POLE BASE DETAIL

NTS



MODIFIED LIGHT POLE BASE DETAIL

NTS

NOTES:
1. EXTEND "L" ANCHORS TO TOP OF CULVERT IF CULVERT TO TOP OF BASE IS LESS THAN ANCHOR LENGTH. IF ANCHORS LENGTH IS LONG ENOUGH TO EXTEND THROUGH TOP OF CULVERT SLAB INSERT ANCHORS THROUGH SLAB SO "L" HOOKS ENGAGE BOTTOM OF TOP SLAB AND COVER HOOKS WITH EPOXY TO PROTECT FROM CORROSION. TWO OF THE DRILLED AND EPOXYED #5 BARS MAY BE ELIMINATED IF ANCHORS EXTEND THROUGH SLAB.
2. INSTALL ⅝" X 8 FT COPPERCLAD GROUND ROD AT EDGE OF CULVERT AND CONNECT TO ANCHOR BOLTS AND BASE PLATE WITH #8 INSULATED COPPER WIRE.

SECOND AND WALNUT LIGHTING SERVICE PEDESTAL CIRCUITS

CIRCUIT	VOLTS	AMP RATING	CONDUCTOR	LOAD
1. STREET LIGHTS #1 & #2	240	20	3-#4, 1-#8 GND	2 LIGHTS, 2 DUPLEX OUTLETS
2. STREET LIGHTS #3, & #4	240	20	3-#8, 1-#10 GND	2 LIGHTS, 2 DUPLEX OUTLETS
3. STREET LIGHTS #5, 6 & #7	240	25	3-#3, 1-#8 GND	3 LIGHTS, 3 DUPLEX OUTLETS
4. SPARE	240	20		
5. SPARE	240	20		
6. SPARE	240	20		
7. SPARE	240	25		

NOTES:
1. ALL WIRE TO BE CONDUCTOR TYPE XHHW-2
2. ALL LIGHTS ARE TO BE 66 WATT.
3. EACH RECEPTACLE ON POLES SHALL BE GFCI 120V.
4. IT IS INTENDED THAT ONE LEG OF EACH CIRCUIT WILL BE CONNECTED TO ALTERNATING LIGHTS PROVIDING 120V POWER AT EACH LIGHT.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	PNE
Drawn By	PNE
Checked By	TJM
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Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

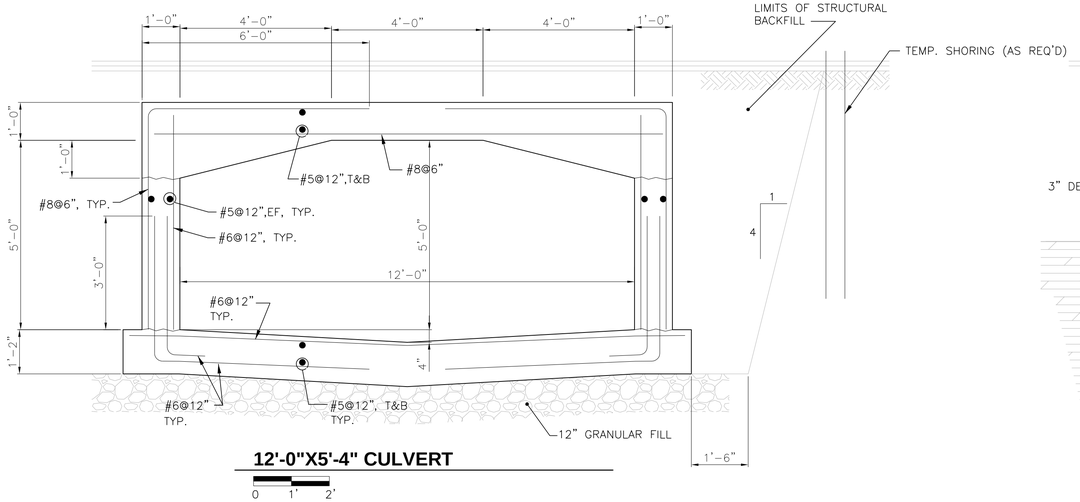
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS ELECTRICAL CONNECTIONS

DONOHUE & ASSOCIATES

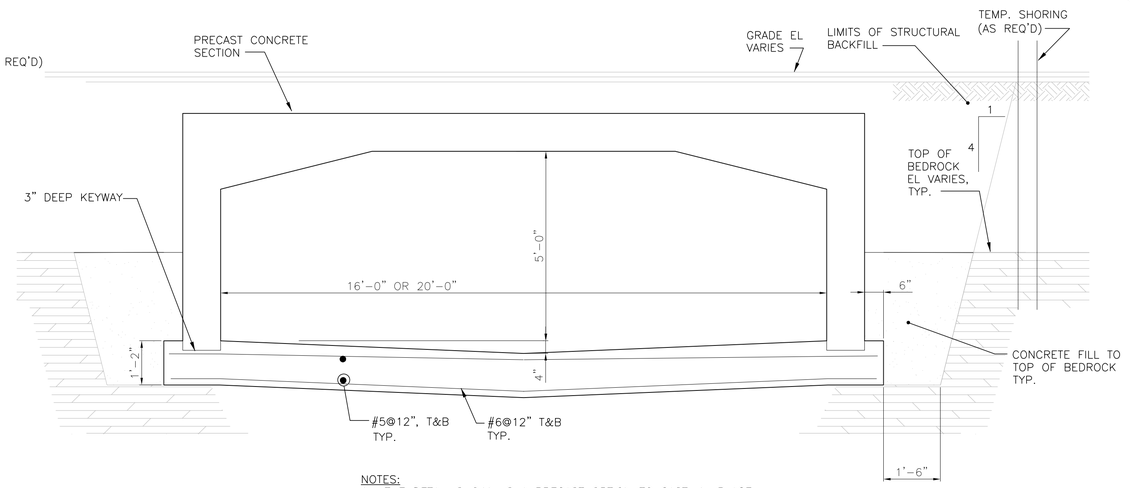
Sheet No. 40

Drawing No. **M7**



12'-0"X5'-4" CULVERT

0 1' 2'



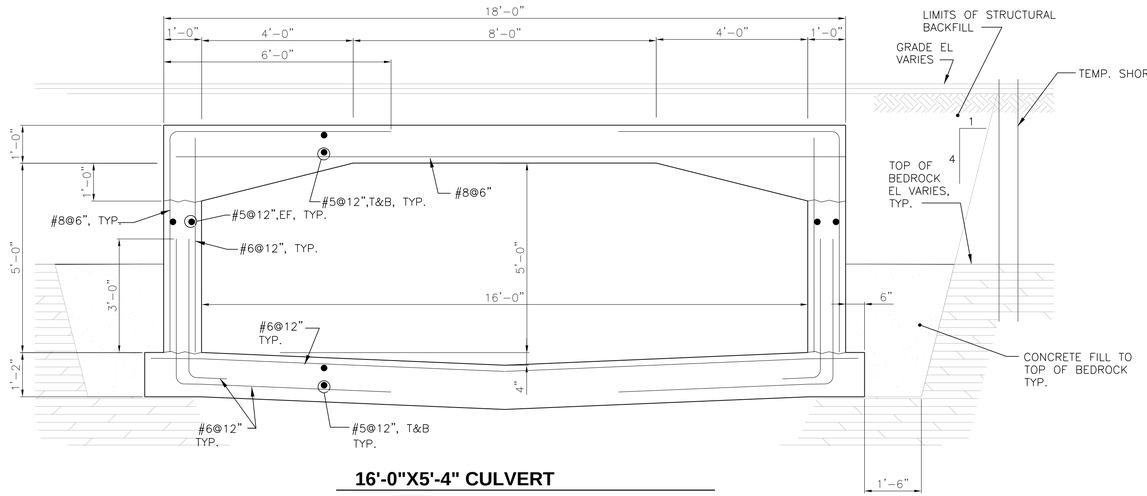
NOTES:

1. THE DETAIL SHOWN IS A PRECAST OPTION TO CAST-IN-PLACE CONCRETE.
2. THIS DETAIL IS TO BE APPLIED TO STRAIGHT LENGTHS OF CULVERT ONLY.
3. PRECAST SECTIONS MAY BE USED FOR THE 16'-0"x5'-4" AND 20'-0"X5'-4" CULVERT SECTIONS.
4. PROVIDE 8" MIN. JOINT WRAP AT PRECAST JOINTS THAT MEETS OR EXCEEDS THE REQUIREMENTS OF ASTM E-1745 AND ASTM C-990. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ACCEPTABLE PRODUCT: CS-2121 POLYOLEFIN BACKED EXTERIOR JOINT WRAP BY CONSEAL.

DETAIL 1

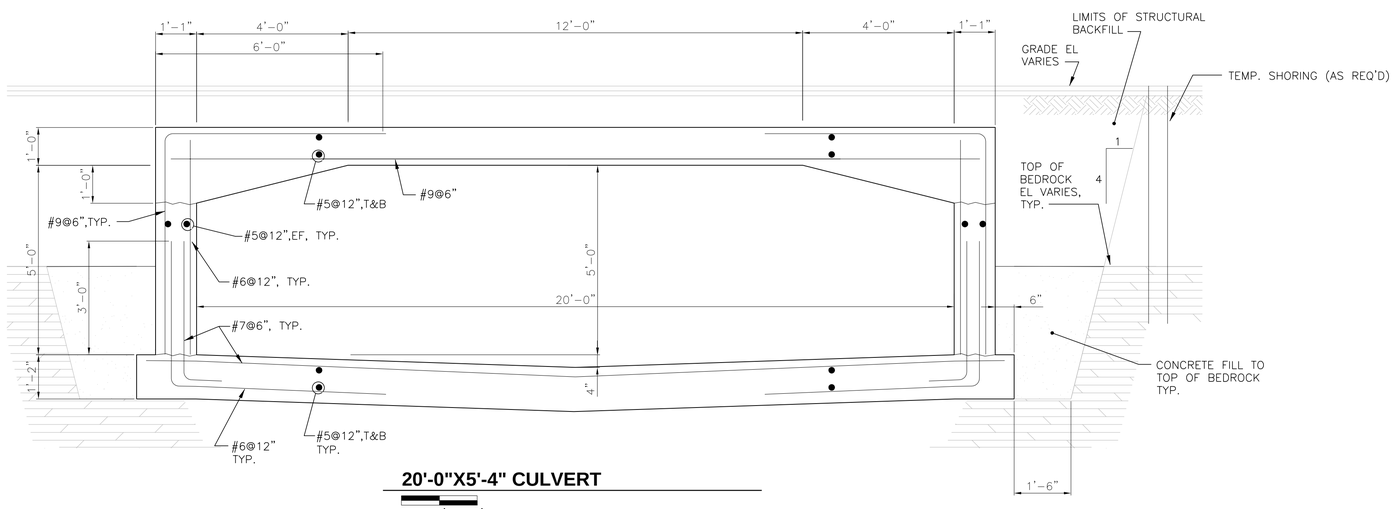
P1 TO P6

0 1' 2'



16'-0"X5'-4" CULVERT

0 1' 2'



20'-0"X5'-4" CULVERT

0 1' 2'

GENERAL NOTES:

1. THE 12'-0"X5'-4" CULVERT STRUCTURES SHALL BE ALL CAST-IN-PLACE CONCRETE TO PROPERLY RESTRAIN THE STRUCTURE FROM MOVEMENT.
2. ALL CULVERT BENDS SHALL BE CAST-IN-PLACE CONCRETE.
3. PRECAST SECTIONS MAY BE USED FOR THE 16'-0"X5'-4" AND 20'-0"X5'-4" CULVERT SECTIONS AS AN ALTERNATE TO CAST-IN-PLACE CONCRETE. IF PRECAST SECTIONS ARE USED THE REINFORCING SHALL CONFORM TO THAT SHOWN FOR CAST-IN-PLACE CONCRETE.
4. TRANSITION STRUCTURE AND JUNCTION STRUCTURE SHALL BE CAST-IN-PLACE CONCRETE.
5. STRUCTURAL BACKFILL SHALL MEET THE GRADATION REQUIREMENTS FOR AN INDOT No. 8 STONE.
6. INLET STRUCTURES TO BE CONSTRUCTED OVER THE CULVERT SHALL BE LOCATED AS SHOWN ON DRAWINGS P-1 TO P-3.
7. CASTING 10 USED FOR INLETS OVER THE CULVERT SHALL BE ADJUSTED TO GRADE WITH CONCRETE BRICKS AND MORTAR IF ADJUSTMENT IS LESS THAN 6" IN HEIGHT. FOR ADJUSTMENTS OVER 6" IN HEIGHT PRECAST CONCRETE ADJUSTING RINGS WITH 24" INSIDE DIAMETER SHALL BE USED.
8. THE OPENING THROUGH THE ROOF OF THE CULVERT SHALL BE 24" X 18" IN SIZE WITH THE 24" DIMENSION PARALLEL WITH THE CURBLINE. ADDITIONAL REINFORCING AROUND THE OPENING SHALL BE PROVIDED AND CONFORM TO DETAIL SO20 ON DRAWING S-8. ADJUST FINAL LOCATION OF CASTING SO NO OPENING IS LESS THAN 12" FROM EDGE OF PRECAST SECTIONS IF CONTRACTOR ELECTS TO USE PRECAST ALTERNATE. FIELD CUTTING OPENINGS WILL NOT BE PERMITTED TO AVOID CUTTING REINFORCEMENT.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	SCP
Drawn By	HFF
Checked By	SCP
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Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

12/2/11

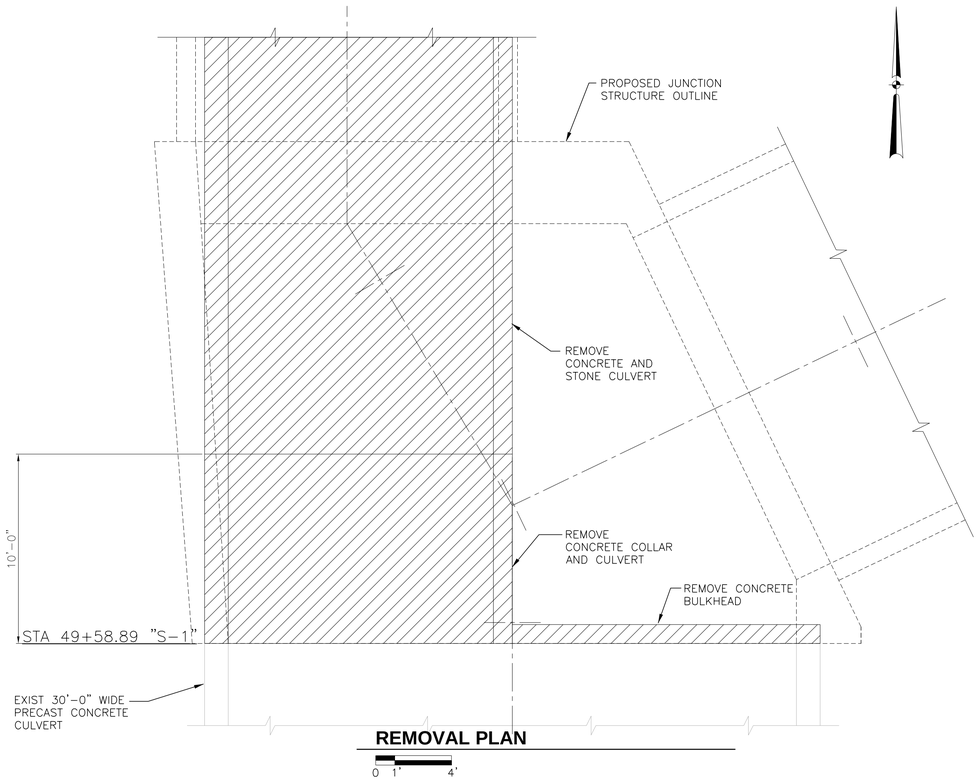
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CULVERT STRUCTURE TYPICAL SECTIONS

DONOHUE & ASSOCIATES

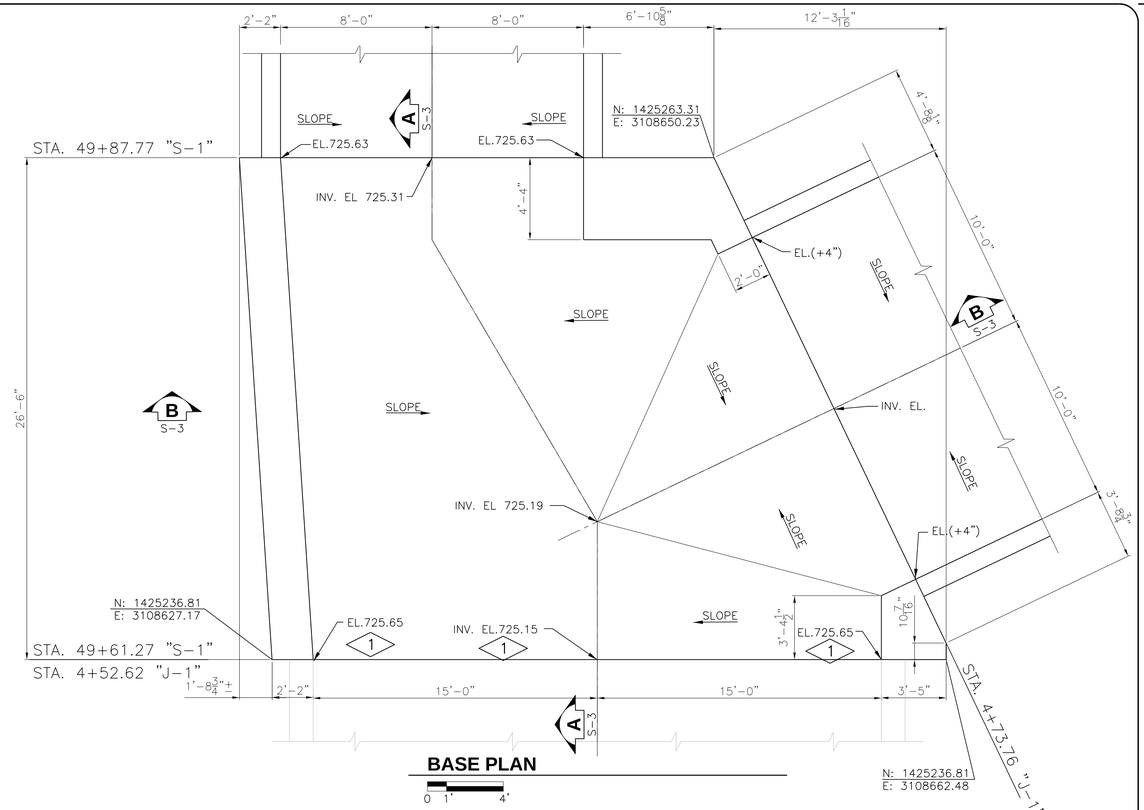
Sheet No. 41

Drawing No. **S-1**



REMOVAL PLAN

0 1" 4'



BASE PLAN

0 1" 4'

GENERAL NOTES:

1. JUNCTION STRUCTURE SHALL BE CONSTRUCTED OF CAST-IN-PLACE CONCRETE.

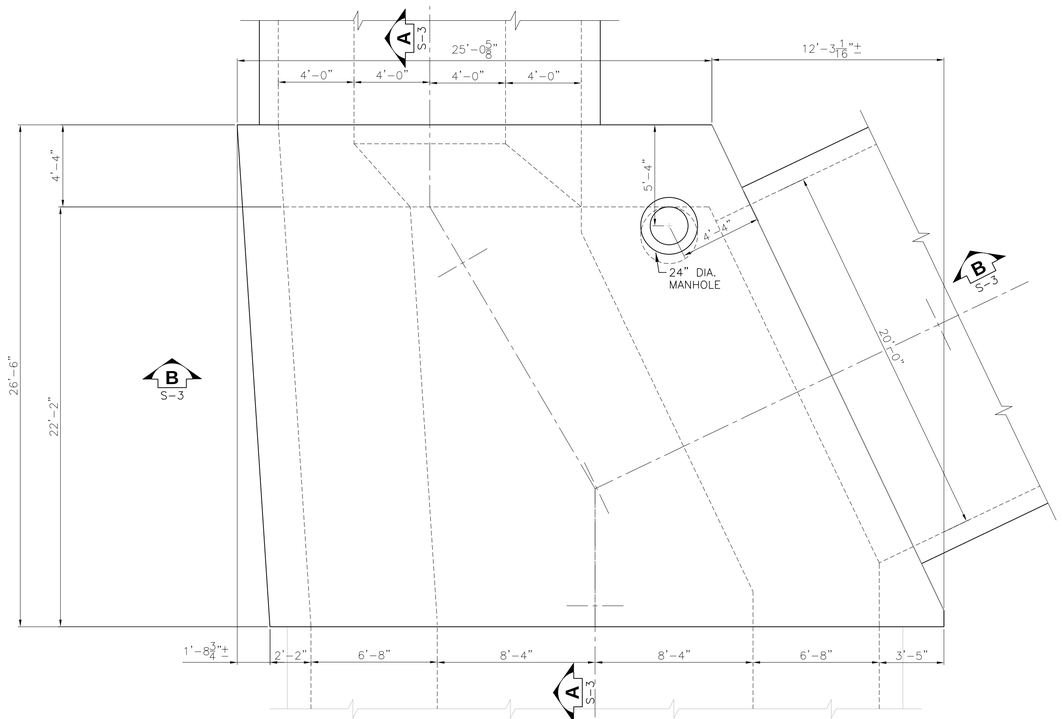
PLAN NOTES:

1. ADJUST JUNCTION STRUCTURE FLOOR ELEVATION AS REQUIRED TO MATCH EXISTING CULVERT FLOOR.

DETAIL 2

P1

0 1" 4'



ROOF PLAN

0 1" 4'

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Designed By	SCP
Drawn By	HFF
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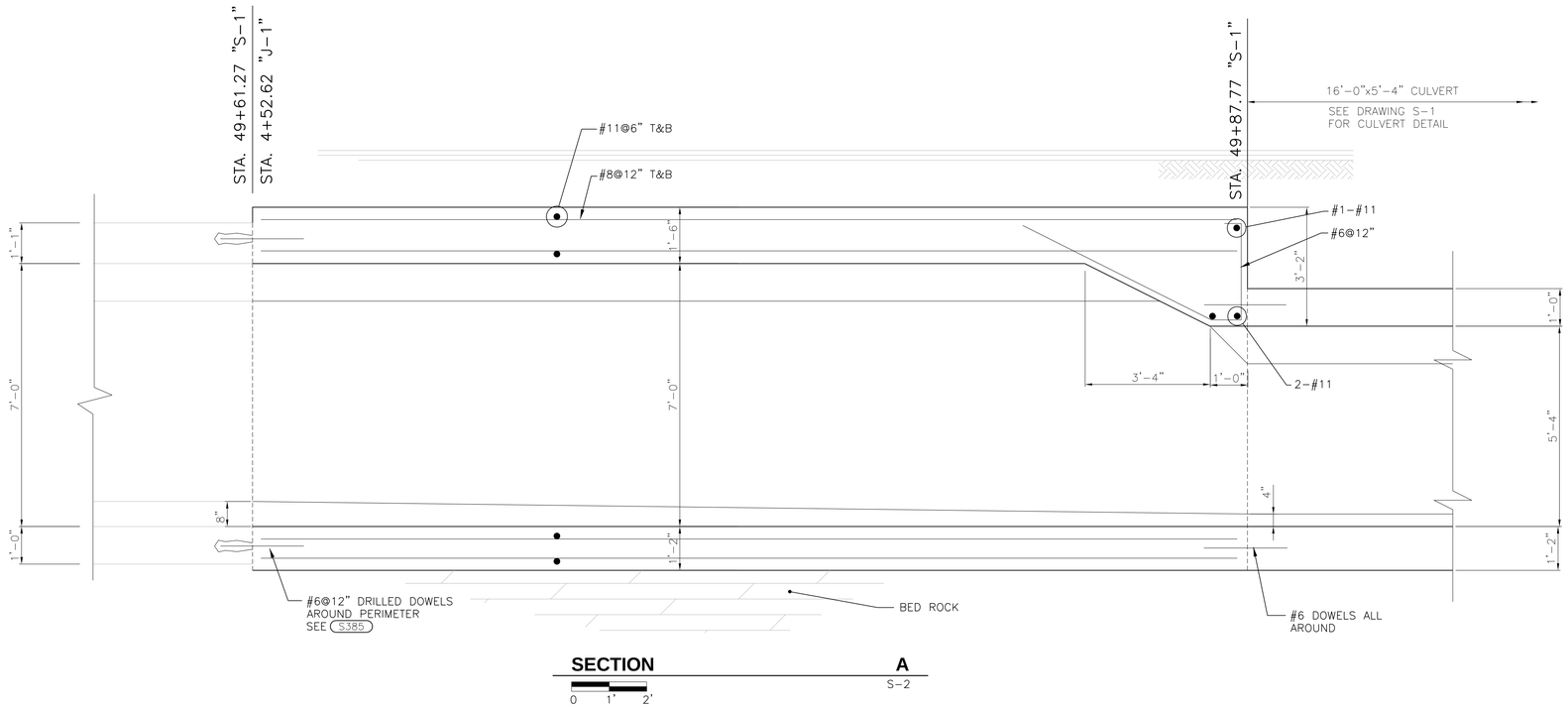
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

JUNCTION STRUCTURE REMOVAL, BASE AND ROOF PLANS

DONOHUE & ASSOCIATES

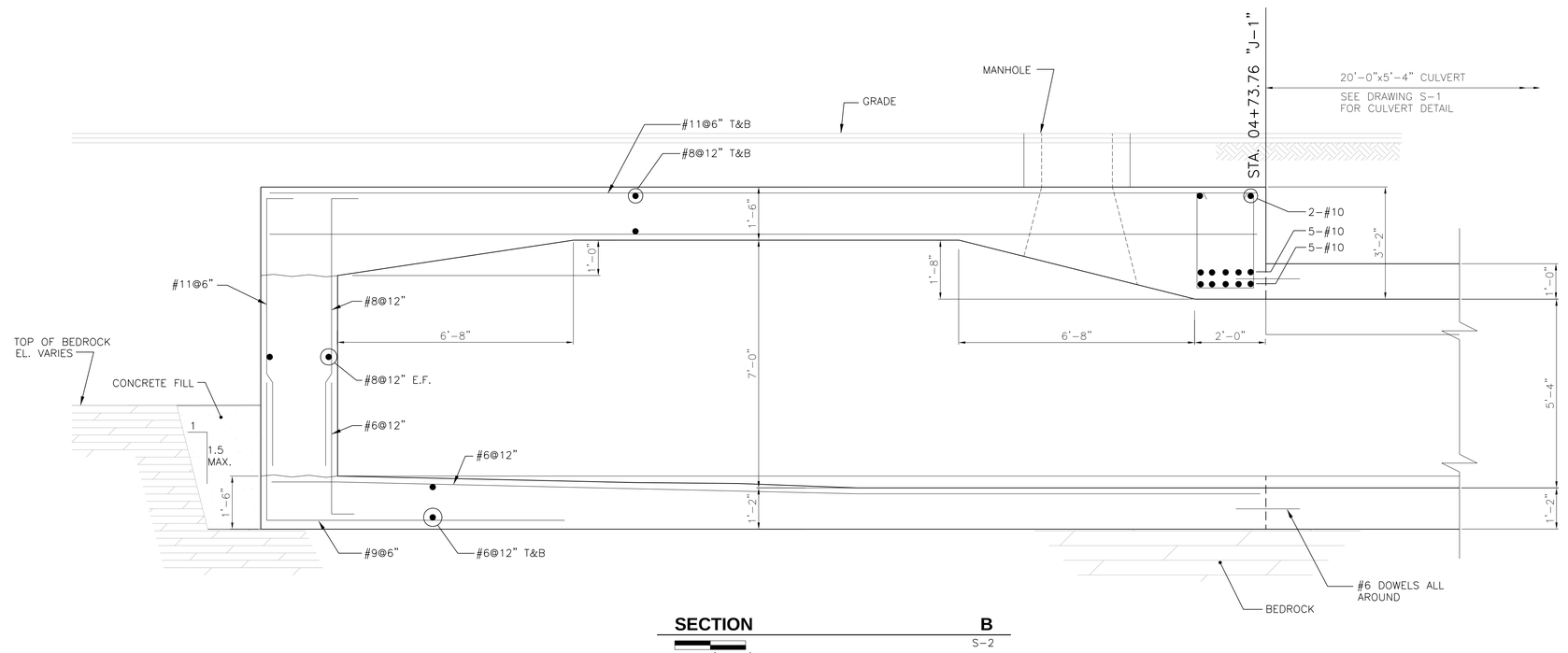
Sheet No. 42

Drawing No. **S-2**



SECTION A S-2

0 1' 2'



SECTION B S-2

0 1' 2'

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	SCP
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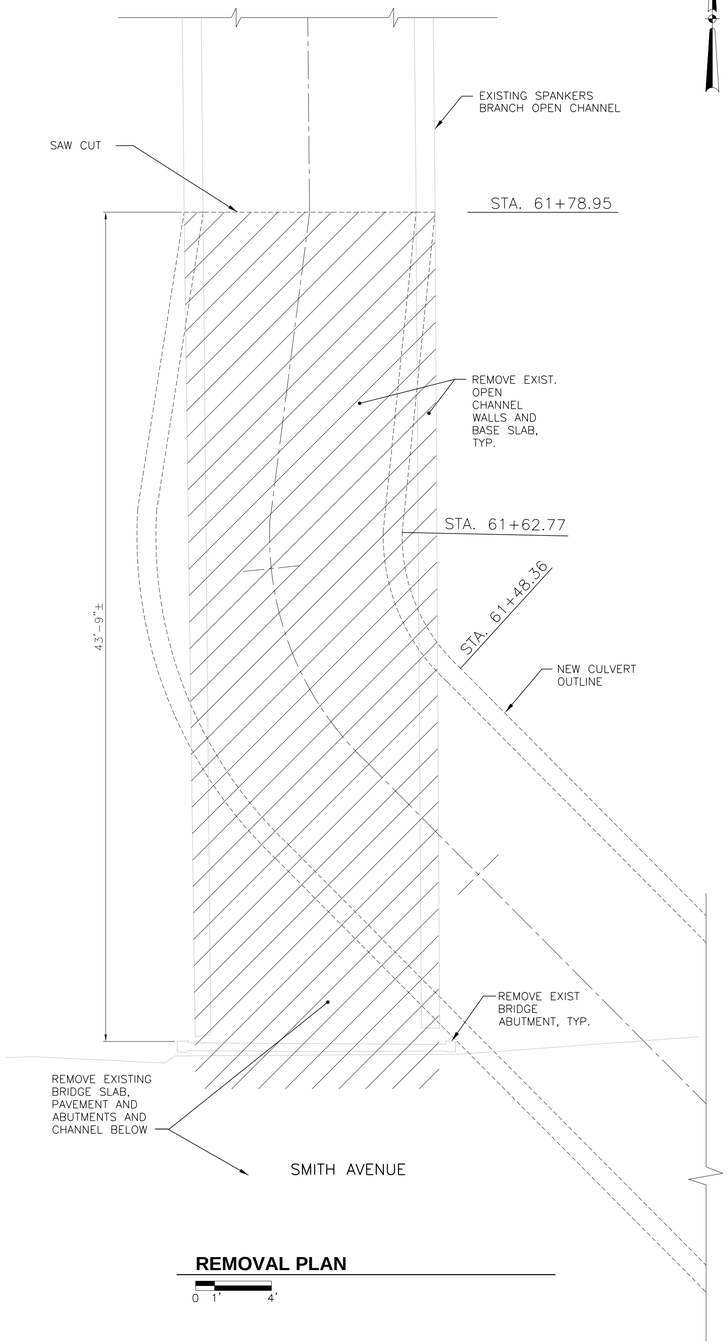
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

SECTIONS
CULVERT JUNCTION BOX

DONOHUE & ASSOCIATES

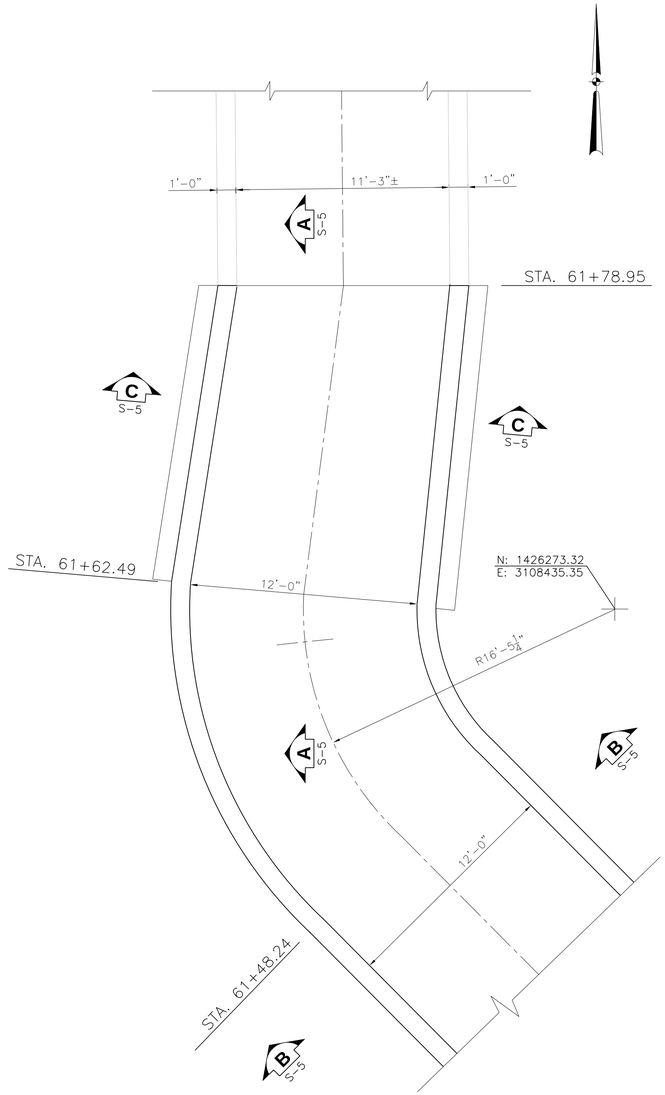
Sheet No. 43

Drawing No. **S-3**



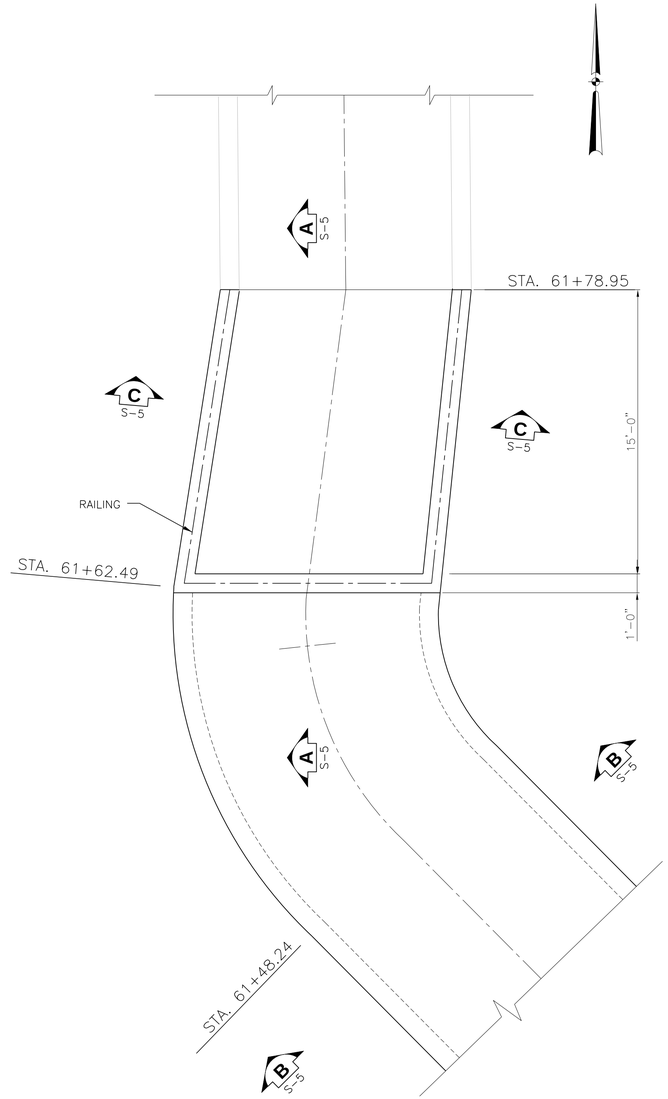
REMOVAL PLAN

0 1' 4'



LOWER PLAN

0 1' 4'



UPPER PLAN

0 1' 4'

DETAIL 3

P4

0 1' 4'

Designed By	SCP
Drawn By	HFF
Checked By	SCP
Approved By	PNE
Filename	246SS1.DWG
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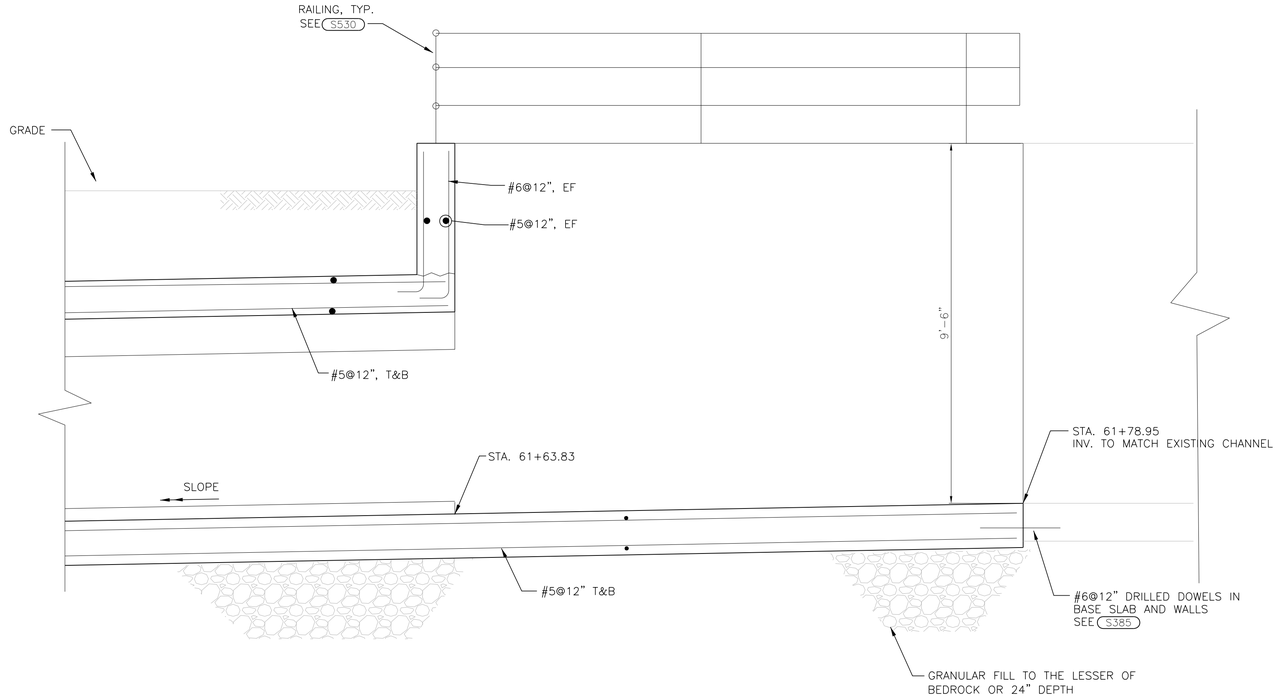
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

TRANSITION STRUCTURE
SMITH AVENUE TO OPEN CHANNEL

DONOHUE & ASSOCIATES

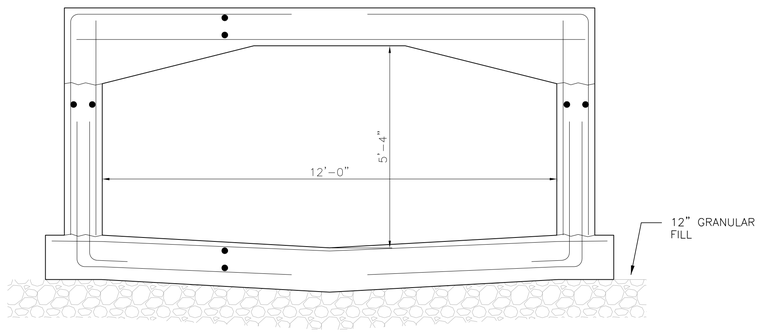
Sheet No. 44

Drawing No. **S-4**



SECTION A S-4

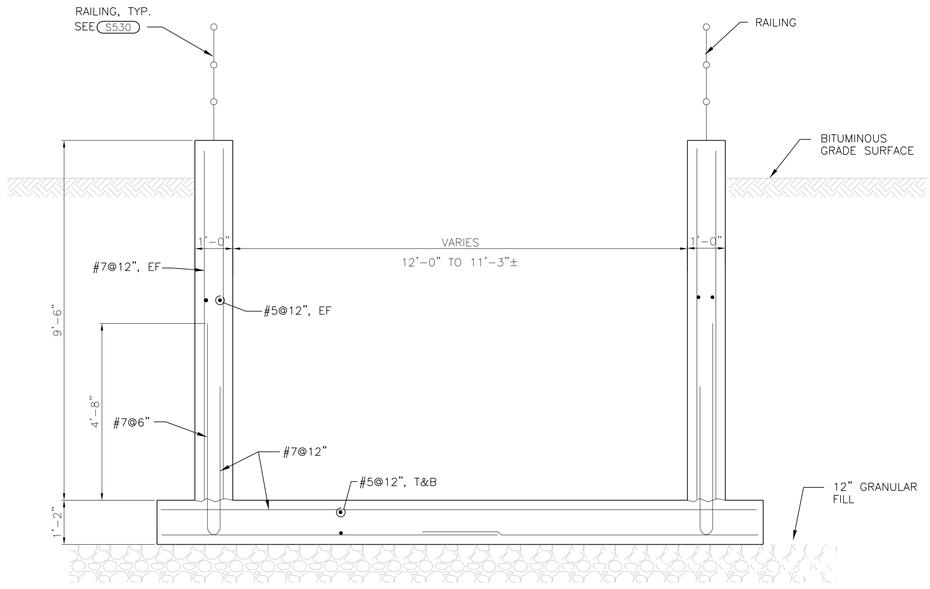
0 1' 2'



NOTE: SEE 12'-0"X5'-4" CULVERT ON DRAWING S-1 FOR REINFORCING AND DETAILS NOT SHOWN.

SECTION B S-4

0 1' 2'



SECTION C S-4

0 1' 2'

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	SCP
Drawn By	HFF
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Project No.	11340&11721
Project Date	12/2/11

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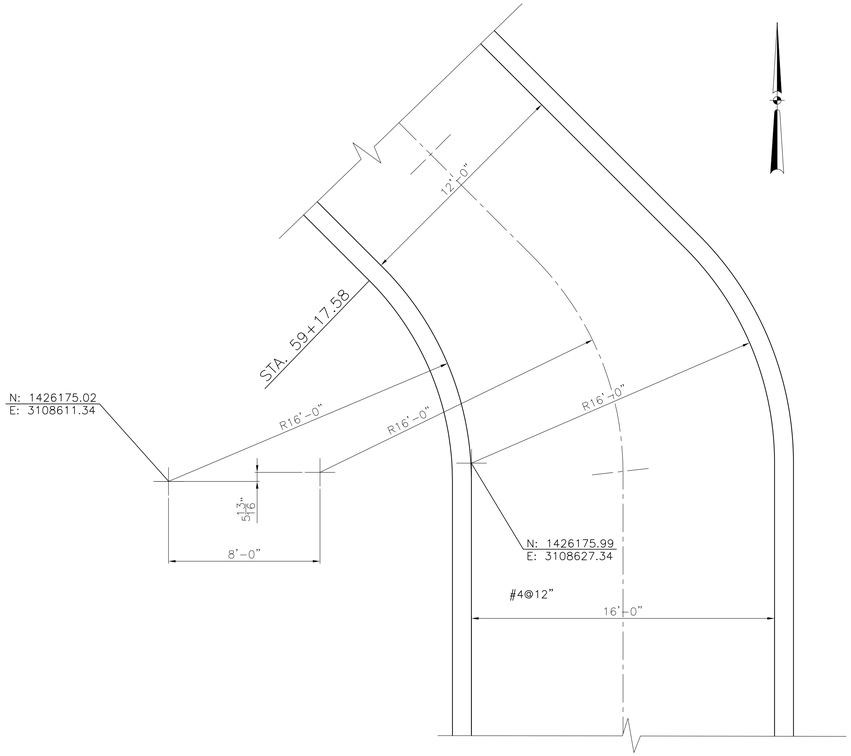
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

TRANSITION STRUCTURE
SMITH AVENUE TO OPEN CHANNEL

DONOHUE & ASSOCIATES

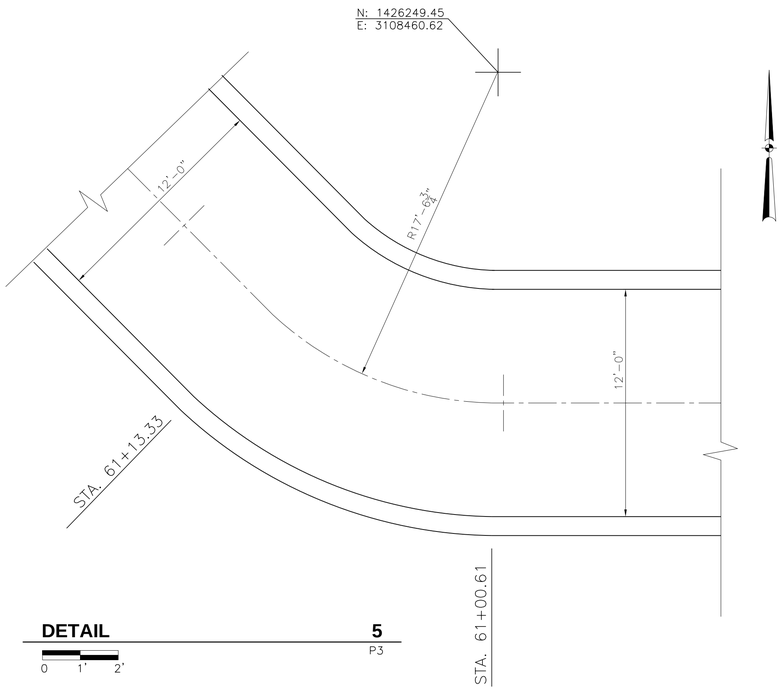
Sheet No. 45

Drawing No. **S-5**



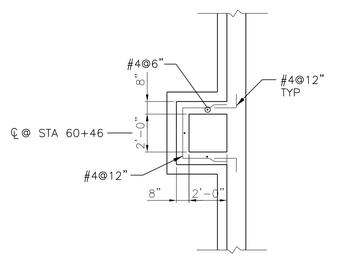
DETAIL 4 P3

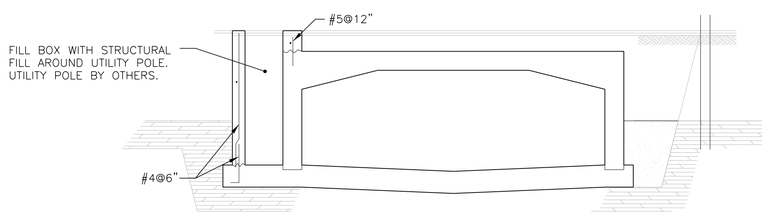
0 1' 4'



DETAIL 5 P3

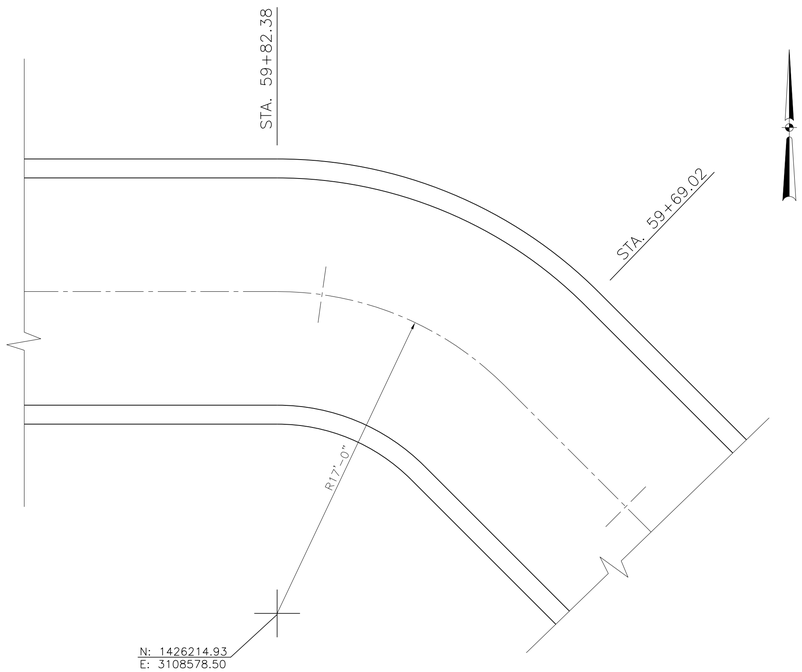
0 1' 2'





DETAIL 6 P4

0 1' 4'



DETAIL 7 P4

0 1' 4'

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PNE
Filename	246SS1.DWG
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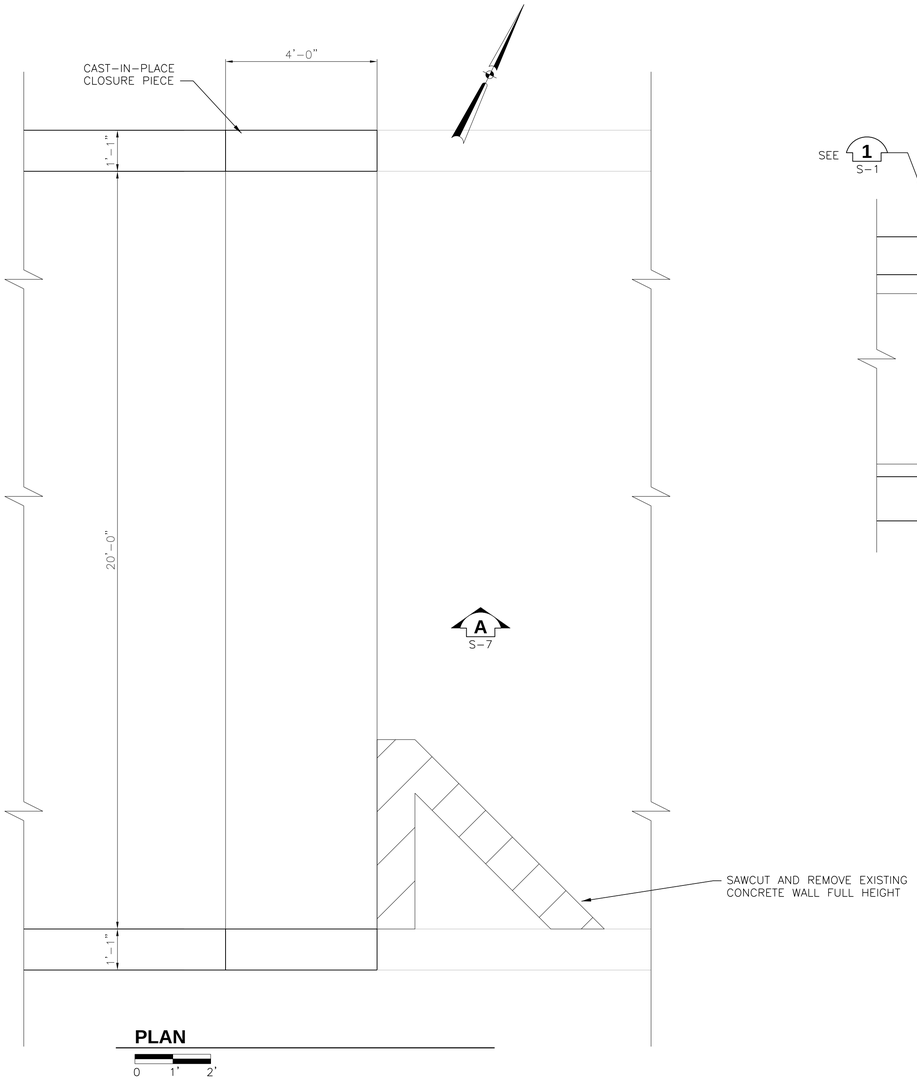
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

TRANSITION STRUCTURE
JORDAN RIVER CULVERT

DONOHUE & ASSOCIATES

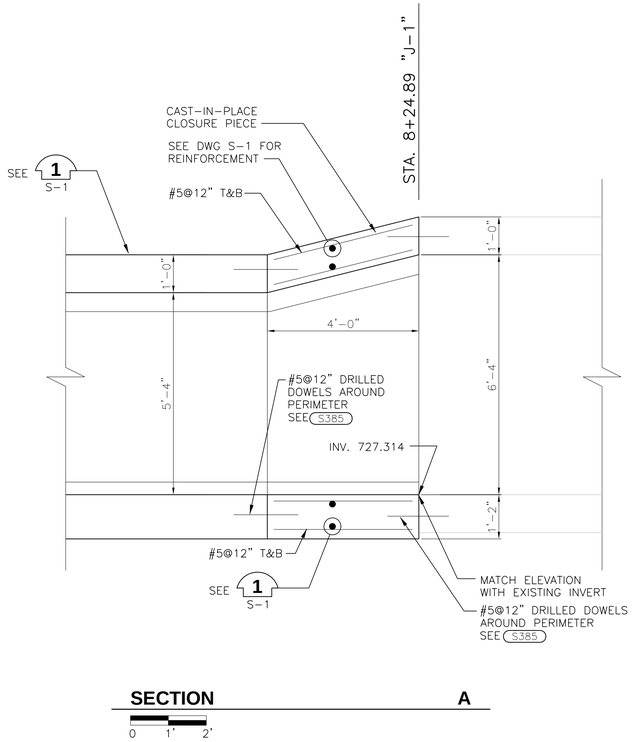
Sheet No. 46

Drawing No. **S-6**



PLAN

0 1' 2'



SECTION A

0 1' 2'

DETAIL 8

P5

0 1' 2'

Designed By	AJT
Drawn By	AJT
Checked By	PJE
Approved By	PNE
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CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

TRANSITION STRUCTURE
JORDAN RIVER CULVERT

DONOHUE & ASSOCIATES

Sheet No. 47

Drawing No. **S-7**

GENERAL STRUCTURAL NOTES

1. THE GENERAL STRUCTURAL NOTES AND STANDARD STRUCTURAL DETAILS APPLY TO THE ENTIRE PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE.

DESIGN CRITERIA

1. STRUCTURE TO BE DESIGNED AND CONSTUCTED FOR HS25-44 LOADING IN ACCORDANCE WITH 2002 A.A.S.H.T.O. SPECIFICATIONS AND SUBSEQUENT iNTERIM A.A.S.H.T.O. SPECIFICATIONS AND THE ACI CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI 350-01).

FOUNDATIONS

1. GEOTECHNICAL INVESTIGATION BY ALT & WITZIG ENGINEERING, INC.
2. NET BEARING CAPACITIES PER GEOTECHNICAL INVESTIGATION:
   A. BEDROCK 10,000 PSF
   B. LEAN CLAY SOIL 2,000 PSF
3. PLACE FOOTINGS ON NATURAL UNDISTURBED EARTH OR STRUCTURAL FILL.
4. PLACE FILL SIMULTANEOUSLY ON BOTH SIDES OF FREE-STANDING STRUCTURES.
5. PLACE FILL AGAINST FOUNDATION WALLS AFTER CONSTRUCTION SUCH AS CROSS WALLS, BEAMS, OR SLABS ARE IN PLACE TO BRACE WALL AND SUCH CONSTRUCTION HAS REACHED ITS DESIGN STRENGTH.

REINFORCEMENT

1. REINFORCING STEEL
   A. DEFORMED BARS: ASTM A615 - GRADE 60
   B. WELDED WIRE FABRIC (WWF): ASTM A185
2. UNLESS NOTED OTHERWISE PROVIDE CLEAR COVER FOR REINFORCEMENT AS FOLLOWS:
   A. CAST AGAINST
      1. EARTH: 3 INCHES
      2. MUD SLAB: 2 INCHES
   B. EXPOSED TO EARTH, WEATHER, OR WATER
      1. SLABS
         A. #5 BARS OR SMALLER: 1 1/2 INCHES
         B. #6 THROUGH #11 BARS: 2 INCHES
      2. WALLS, BEAMS, AND COLUMNS: 2 INCHES
3. PLACE DOWELS BEFORE PLACING CONCRETE.
4. DO NOT FIELD WELD OR FIELD BEND REINFORCING BARS.

CONCRETE

1. DESIGN STRENGTH
   B. ALL LOCATIONS, EXCEPT WHERE CLASS C SPECIFIED CLASS A: F'c = 4000 PSI
   C. CONCRETE FILL, CLASS C F'c = 2000 PSI
   D. STRUCTURAL PRECAST CONCRETE F'c = PER PRECAST DESIGN
3. UNLESS NOTED OTHERWISE, CONSTRUCTION JOINTS SHOWN ARE OPTIONAL. CONSTRUCTION JOINTS NOT SHOWN SHALL BE APPROVED BY ENGINEER.
4. LIMIT SIZE OF CONCRETE POURS. MAXIMUM LENGTH OF WALL AND SLAB POURS SHALL NOT EXCEED 40 FT.
5. BEFORE CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE CLEANED, LAITANCE REMOVED, AND SURFACE WETTED. REMOVE STANDING WATER.
8. LOCATE VERTICAL JOINTS IN WALL A MIN OF ONE-HALF WALL HEIGHT FROM CORNERS OR OTHER INTERSECTING WALLS. LOCATE HORIZONTAL JOINTS IN WALLS WITHIN THE MIDDLE THIRD OF WALL HEIGHT.
9. BEAMS AND HAUNCHES SHALL BE PLACED MONOLITHICALLY AS PART OF SLAB SYSTEM, UNLESS DETAILED OTHERWISE.
10. CONSTRUCTION JOINTS SHALL HAVE KEYS OR ROUGHENED SURFACES. WHERE ROUGHENED SURFACE USED, SURFACE SHALL HAVE AMPLITUDE OF 1/4 IN. MIN.
11. PROVIDE 3/4 IN. CHAMFER ON ALL EXPOSED CORNERS

MISCELLANEOUS

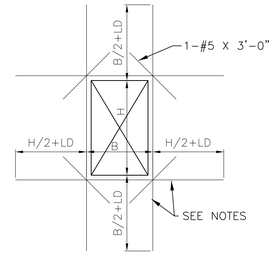
1. VERIFY PERTINENT EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING CONSTRUCTION AND/OR FABRICATION.
2. DO NOT FIELD CUT PRESTRESSING STRANDS IN PRECAST PRESTRESSED CONCRETE MEMBERS WITHOUT WRITTEN APPROVAL OF FABRICATOR AND ENGINEER.

MINIMUM REINFORCEMENT BAR SPLICE AND ANCHORAGE LENGTH (INCHES) S010

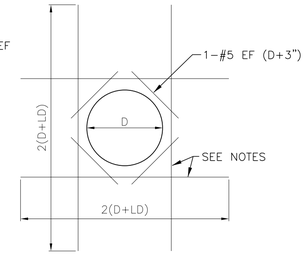
BAR SIZE	LAPPED SPLICE LENGTH		EMBEDMENT LENGTH		COMPRESSION LAP LENGTH
	TOP BARS	OTHERS	TOP BARS	OTHERS	
3	18	16	14	12	12
4	24	19	19	15	15
5	30	23	23	18	19
6	36	28	28	22	23
7	43	33	33	26	26
8	57	44	44	34	30
9	72	56	56	43	34
10	92	70	70	54	38
11	112	86	86	67	42

NOTES:

1. TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
2. FOR BARS SPACED LESS THAN 6 BAR DIAMETER OC INCREASE LENGTH BY 25%.
3. WHEN LAPPING TWO DIFFERENT SIZE BARS USE THE LAP LENGTH OF THE SMALLER BAR UNLESS NOTED OTHERWISE.
4. EMBEDMENT LENGTH IS MINIMUM LENGTH OF EMBEDMENT FOR STRAIGHT DOWELS WHERE END HOOK IS NOT SHOWN, UNLESS OTHERWISE NOTED.
5. COMPRESSION LAP LENGTH FOR VERICAL COLUMN BARS ONLY.
6. HOOKS SHALL BE ACI STANDARD UNLESS OTHERWISE NOTED.
7. FOR EPOXY COATED REINFORCEMENT, INCREASE LENGTH BY 20% FOR TOP BARS AND 50% FOR OTHERS.



RECTANGULAR OPENING



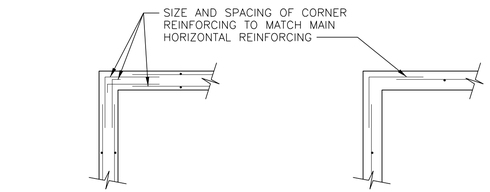
CIRCULAR OPENING

NOTES:

1. THESE DETAILS APPLY TO ALL OPENINGS IN CONCRETE WALLS AND SLABS WHEN THE LARGEST OPENING DIMENSION IS GREATER THAN TWO TIMES SECTION THICKNESS OR GREATER THAN REINFORCING SPACING IN THE SECTION, UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
2. THE AREA OF ADDITIONAL REINFORCING REQUIRED IN EACH FACE ON EACH SIDE OF AN OPENING SHALL EQUAL OR EXCEED ONE-HALF OF THE AREA OF THE INTERCEPTED BARS IN EACH FACE, IN EACH DIRECTION, RESPECTIVELY WITH A MINIMUM OF 1-#5 BAR EACH FACE.
3. PLACE THE ADDED BARS IN THE SAME LAYERS AS THE WALL OR SLAB REINFORCING.
4. LD = EMBEDMENT LENGTH. SEE (S010)

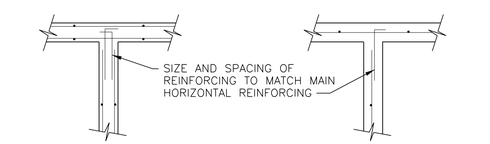
ADDITIONAL REINFORCEMENT AT OPENINGS IN WALLS AND SLABS DETAIL S020

NTS



90° CORNER - 2 LAYERS

90° CORNER - 1 LAYER



T-INTERSECTION - 2 LAYERS

T-INTERSECTION - 1 LAYER

HORIZONTAL REINFORCEMENT DETAIL S030

NTS

Designed By	SCP
Drawn By	SCP
Checked By	PJE
Approved By	PNE
Filename	246SS1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

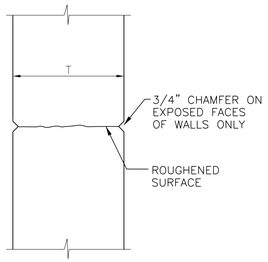
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

STRUCTURE
GENERAL NOTES AND STANDARD DETAILS

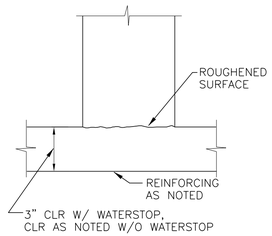
DONOHUE & ASSOCIATES

Sheet No. 48

Drawing No. **S-8**



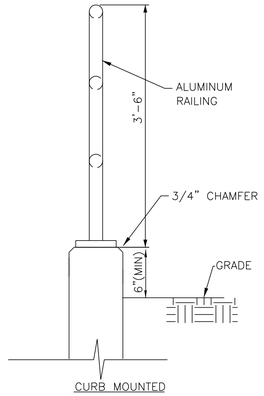
JOINT IN WALLS OR SLABS



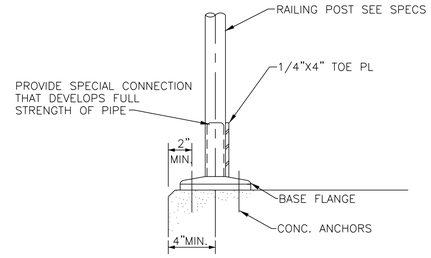
BASE OF WALL

CONSTRUCTION JOINT DETAILS **S300**

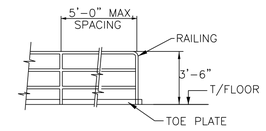
NTS



CURB MOUNTED



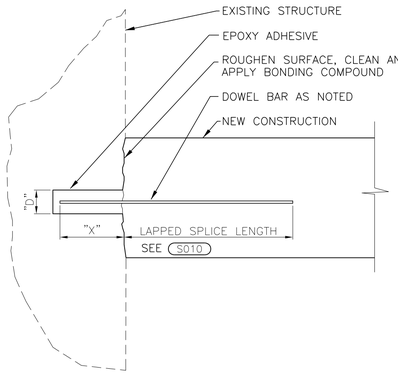
MOUNTING



HORIZONTAL RAILING ELEVATION

RAILING DETAIL **S530**

NTS

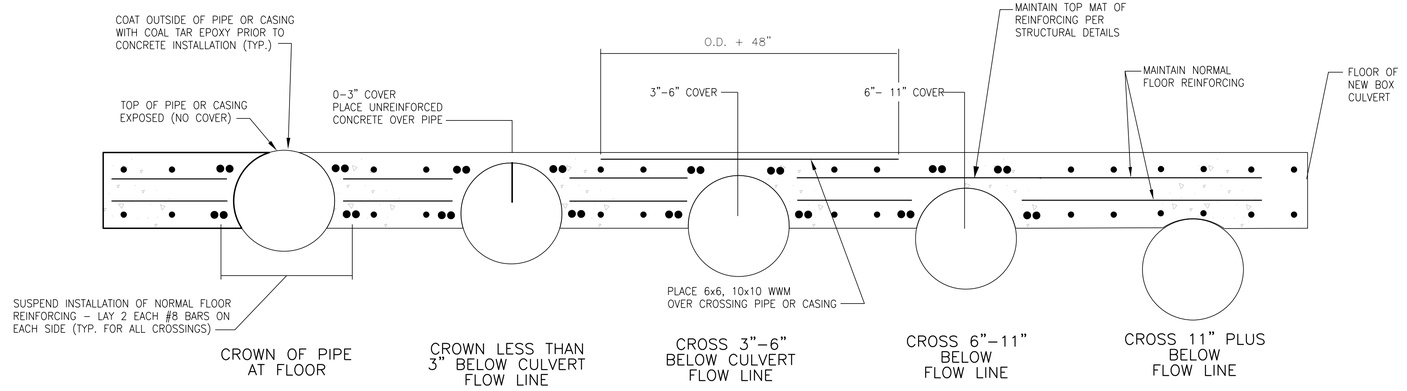


NOTES:

1. EMBEDMENT "X"=16 BAR DIAMETERS MIN.
2. HOLE DIAMETER "D"=2 BAR DIAMETERS MAX.

DRILLED IN DOWEL DETAIL **S385**

NTS



NOTES:

1. REPLACE EXISTING PIPES WITH DUCTILE IRON PIPE FOR ALL PIPE CROSSINGS DISCOVERED WHICH FALL WITHIN PROPOSED CULVERT

MISCELLANEOUS PIPE CROSSINGS IN TUNNEL FLOORS

N.T.S.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	SCP
Drawn By	SCP
Checked By	PJE
Approved By	PNE
Filename	246SS1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

12/2/11

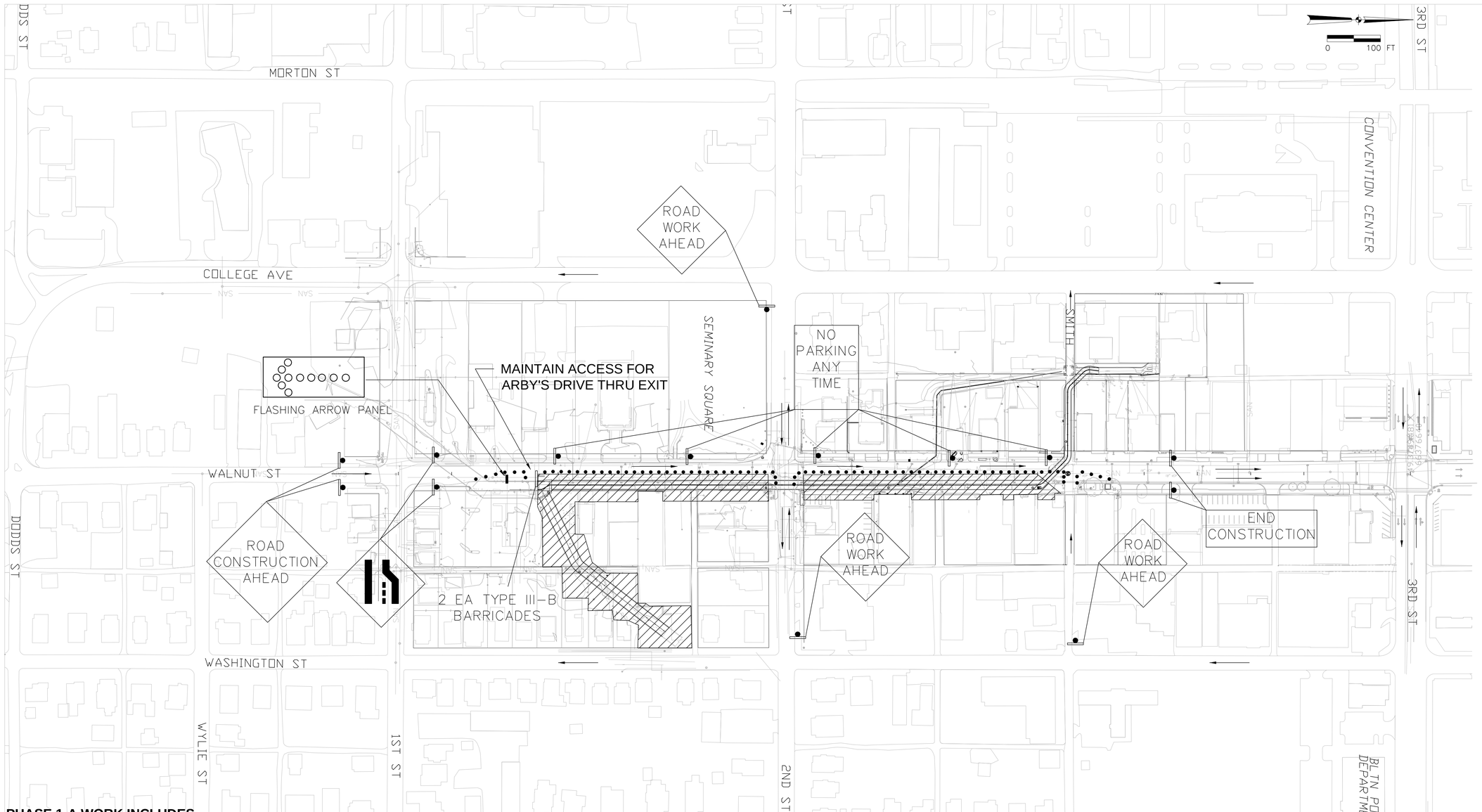
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

STRUCTURE STANDARD DETAILS

DONOHUE & ASSOCIATES

Sheet No. 49

Drawing No. **S-9**



PHASE 1-A WORK INCLUDES

1. CONSTRUCT STORM CULVERT FOR JORDAN RIVER.
2. CONSTRUCT STORM CULVERT AND SANITARY SEWER LINE ON WALNUT STREET.
3. CONSTRUCT STREETSCAPE IMPROVEMENTS ON EAST SIDE OF WALNUT.
4. MAINTAIN ONE-LANE TRAFFIC ON WEST SIDE OF WALNUT STREET THROUGH PHASE 1-A.
5. MAINTAIN TRAFFIC ACROSS WALNUT AT SECOND STREET AND SMITH AVE.

NOTES:

1. PHASE 1-A SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 FT WIDE LANE THROUGH CONSTRUCTION ZONE.

LEGEND

- PHASE 1-A CONSTRUCTION ZONE
- CONSTRUCTION SIGN
- BARRICADE, TYPE III-B
- CONSTRUCTION BARRELS
- ONE-WAY ROAD

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	JAB
Drawn By	JAB
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Approved By	PNE
Filename	246MTRAF.DWG
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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

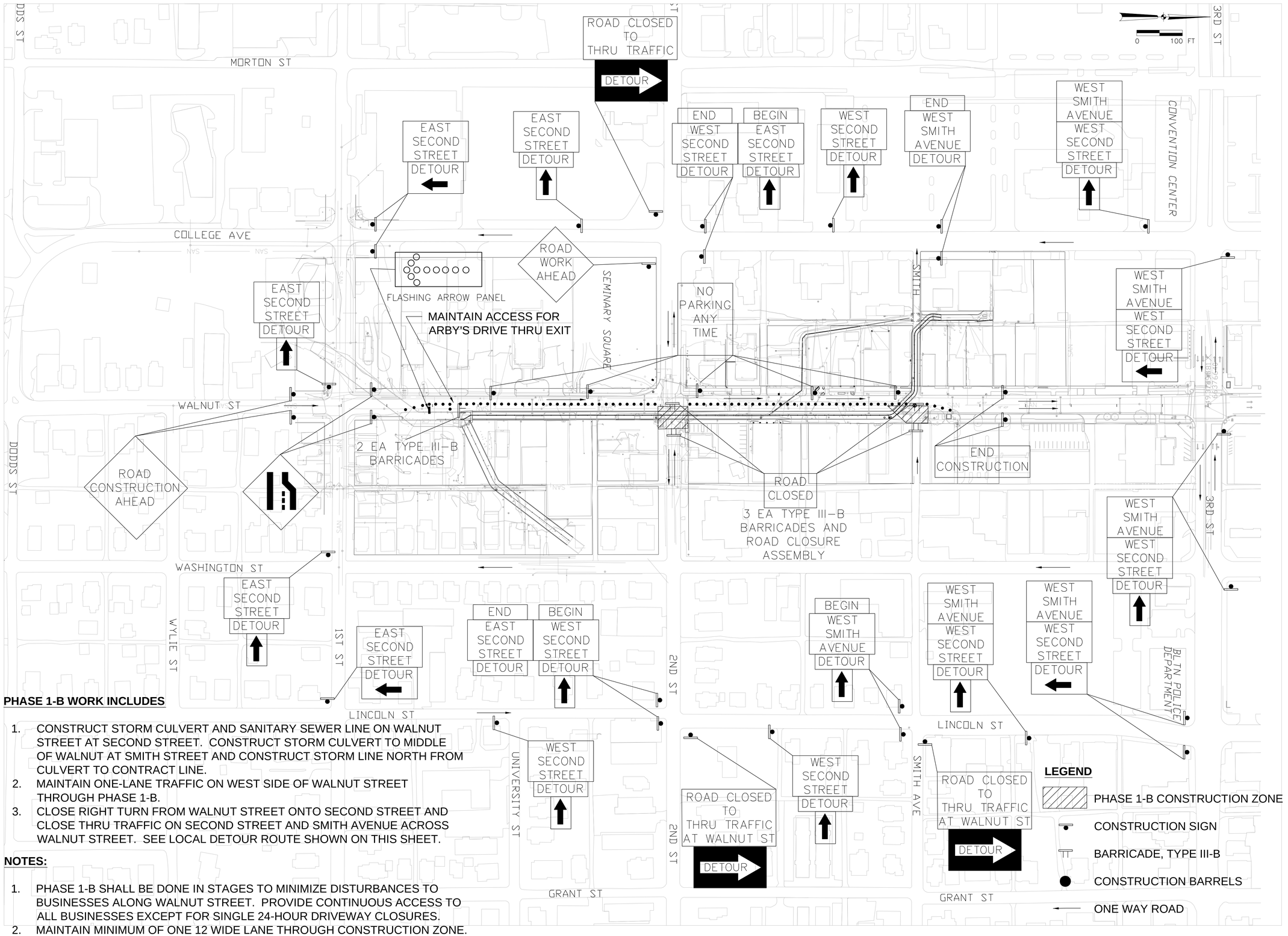
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PHASE 1-A MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 50

Drawing No. **T-1**



PHASE 1-B WORK INCLUDES

1. CONSTRUCT STORM CULVERT AND SANITARY SEWER LINE ON WALNUT STREET AT SECOND STREET. CONSTRUCT STORM CULVERT TO MIDDLE OF WALNUT AT SMITH STREET AND CONSTRUCT STORM LINE NORTH FROM CULVERT TO CONTRACT LINE.
2. MAINTAIN ONE-LANE TRAFFIC ON WEST SIDE OF WALNUT STREET THROUGH PHASE 1-B.
3. CLOSE RIGHT TURN FROM WALNUT STREET ONTO SECOND STREET AND CLOSE THRU TRAFFIC ON SECOND STREET AND SMITH AVENUE ACROSS WALNUT STREET. SEE LOCAL DETOUR ROUTE SHOWN ON THIS SHEET.

NOTES:

1. PHASE 1-B SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 WIDE LANE THROUGH CONSTRUCTION ZONE.

Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
Designed By	JAB
Drawn By	JAB
Checked By	TJM
Approved By	PNE
Filename	246MTRAF.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

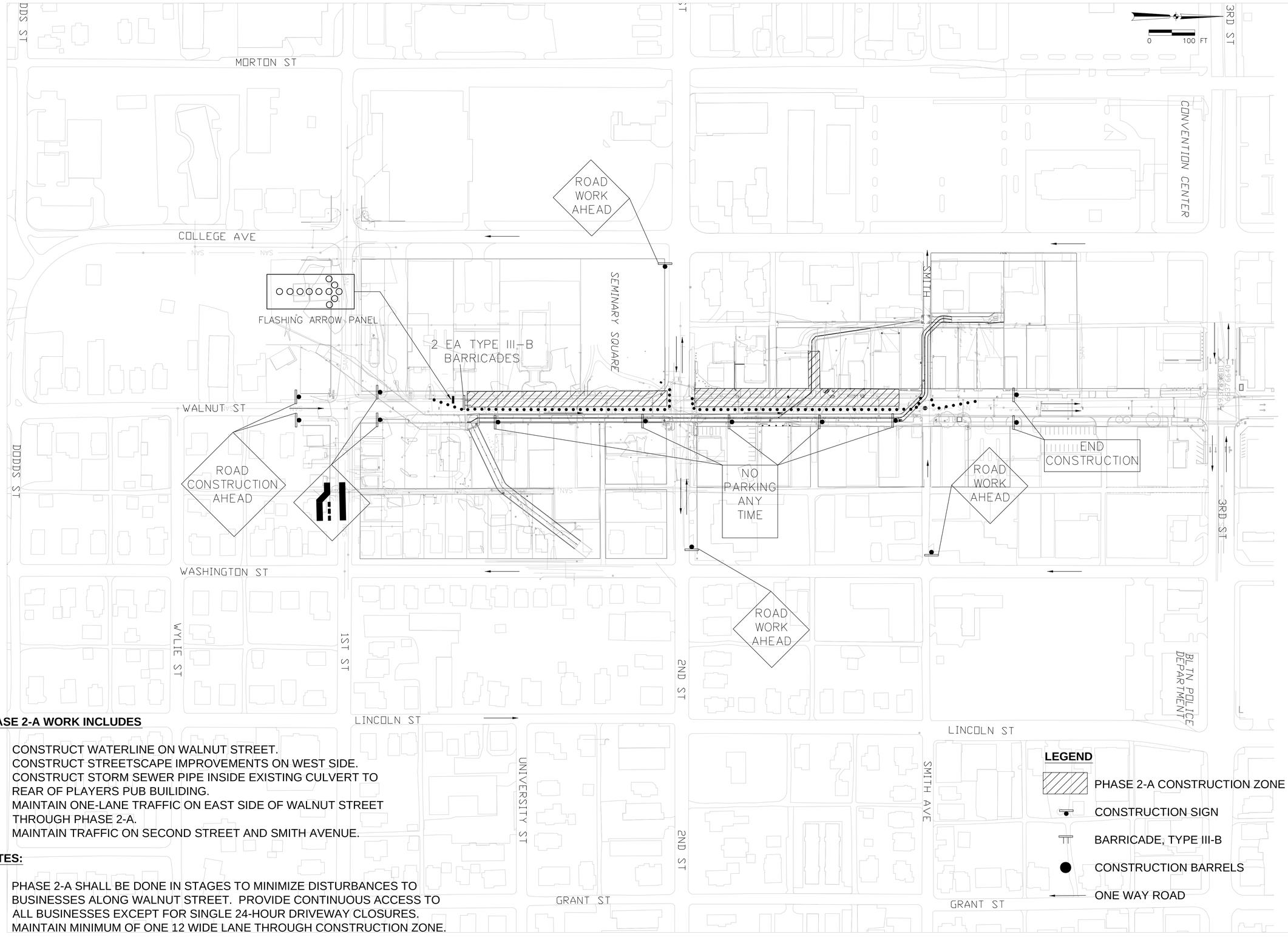
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PHASE 1-B
MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 51

Drawing No. **T-2**



PHASE 2-A WORK INCLUDES

1. CONSTRUCT WATERLINE ON WALNUT STREET.
2. CONSTRUCT STREETSCAPE IMPROVEMENTS ON WEST SIDE.
3. CONSTRUCT STORM SEWER PIPE INSIDE EXISTING CULVERT TO REAR OF PLAYERS PUB BUILIDING.
4. MAINTAIN ONE-LANE TRAFFIC ON EAST SIDE OF WALNUT STREET THROUGH PHASE 2-A.
5. MAINTAIN TRAFFIC ON SECOND STREET AND SMITH AVENUE.

NOTES:

1. PHASE 2-A SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 WIDE LANE THROUGH CONSTRUCTION ZONE.

LEGEND

- PHASE 2-A CONSTRUCTION ZONE
- CONSTRUCTION SIGN
- BARRICADE, TYPE III-B
- CONSTRUCTION BARRELS
- ONE WAY ROAD

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	JAB
Drawn By	JAB
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Filename	246MTRAF.DWG
Project No.	11340&11721
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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

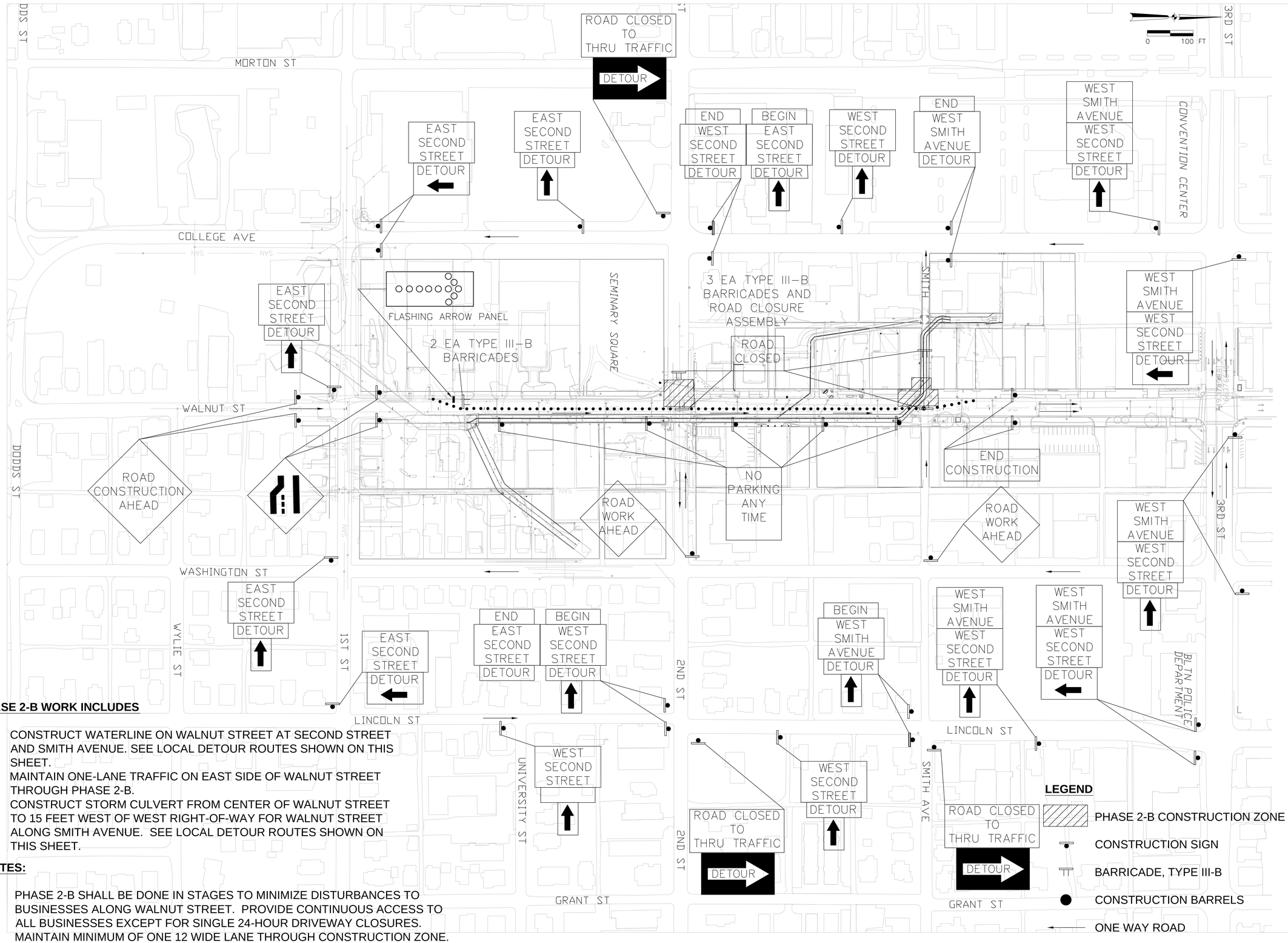
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PHASE 2-A
MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 52

Drawing No. **T-3**



PHASE 2-B WORK INCLUDES

1. CONSTRUCT WATERLINE ON WALNUT STREET AT SECOND STREET AND SMITH AVENUE. SEE LOCAL DETOUR ROUTES SHOWN ON THIS SHEET.
2. MAINTAIN ONE-LANE TRAFFIC ON EAST SIDE OF WALNUT STREET THROUGH PHASE 2-B.
3. CONSTRUCT STORM CULVERT FROM CENTER OF WALNUT STREET TO 15 FEET WEST OF WEST RIGHT-OF-WAY FOR WALNUT STREET ALONG SMITH AVENUE. SEE LOCAL DETOUR ROUTES SHOWN ON THIS SHEET.

NOTES:

1. PHASE 2-B SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 WIDE LANE THROUGH CONSTRUCTION ZONE.

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	JAB
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Checked By	TJM
Approved By	PNE
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Project No.	11340&11721
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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

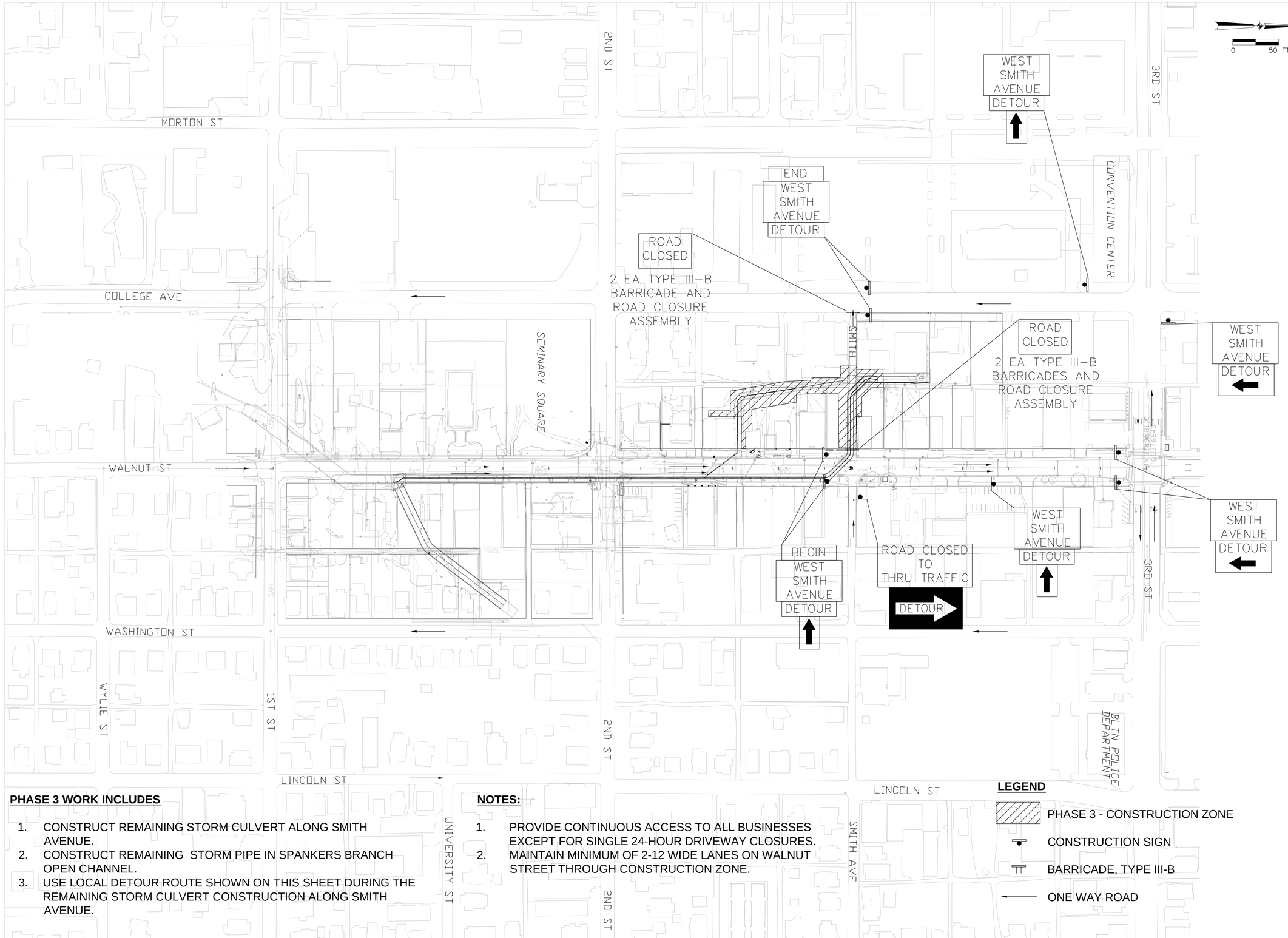
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PHASE 2-B MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 53

Drawing No. **T-4**



PHASE 3 WORK INCLUDES

1. CONSTRUCT REMAINING STORM CULVERT ALONG SMITH AVENUE.
2. CONSTRUCT REMAINING STORM PIPE IN SPANKERS BRANCH OPEN CHANNEL.
3. USE LOCAL DETOUR ROUTE SHOWN ON THIS SHEET DURING THE REMAINING STORM CULVERT CONSTRUCTION ALONG SMITH AVENUE.

NOTES:

1. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF 2-12 WIDE LANES ON WALNUT STREET THROUGH CONSTRUCTION ZONE.

LEGEND

- PHASE 3 - CONSTRUCTION ZONE
- CONSTRUCTION SIGN
- BARRICADE, TYPE III-B
- ONE WAY ROAD

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	JAB
Drawn By	JAB
Checked By	TJM
Approved By	PNE
Filename	246MTRAF.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

PHASE 3
MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 54

Drawing No. **T-5**

NOTES:

1. EACH PEDESTRIAN INDICATION SHALL HAVE A PEDESTRIAN PUSH BUTTON AND SIGN R10-4b.
2. CONTRACTOR SHALL PULL EXISTING POWER CABLE BACK TO NEW HANDHOLE AND REUSE EXISTING CABLE THROUGH NEW CONDUIT TO NEW CONTROLLER.
3. PAVEMENT MARKINGS ARE SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING DETAIL SHEETS.
4. CONTRACTOR SHALL ADD A SPOOL OR ATTACHMENT DEVICE AND COORDINATE WITH DUKE ENERGY.
5. EXISTING LIGHT POLE IN NORTHEAST CORNER TO BE REMOVED BY POWER COMPANY.
6. HOUSING FOR ALL TRAFFIC SIGNAL INDICATIONS SHALL BE BLACK.
7. ALL STRAIN POLES SHALL BE POWDER COATED GREEN.

7'-0"

S Walnut St 1'-6"

SNS-1

5'-0"

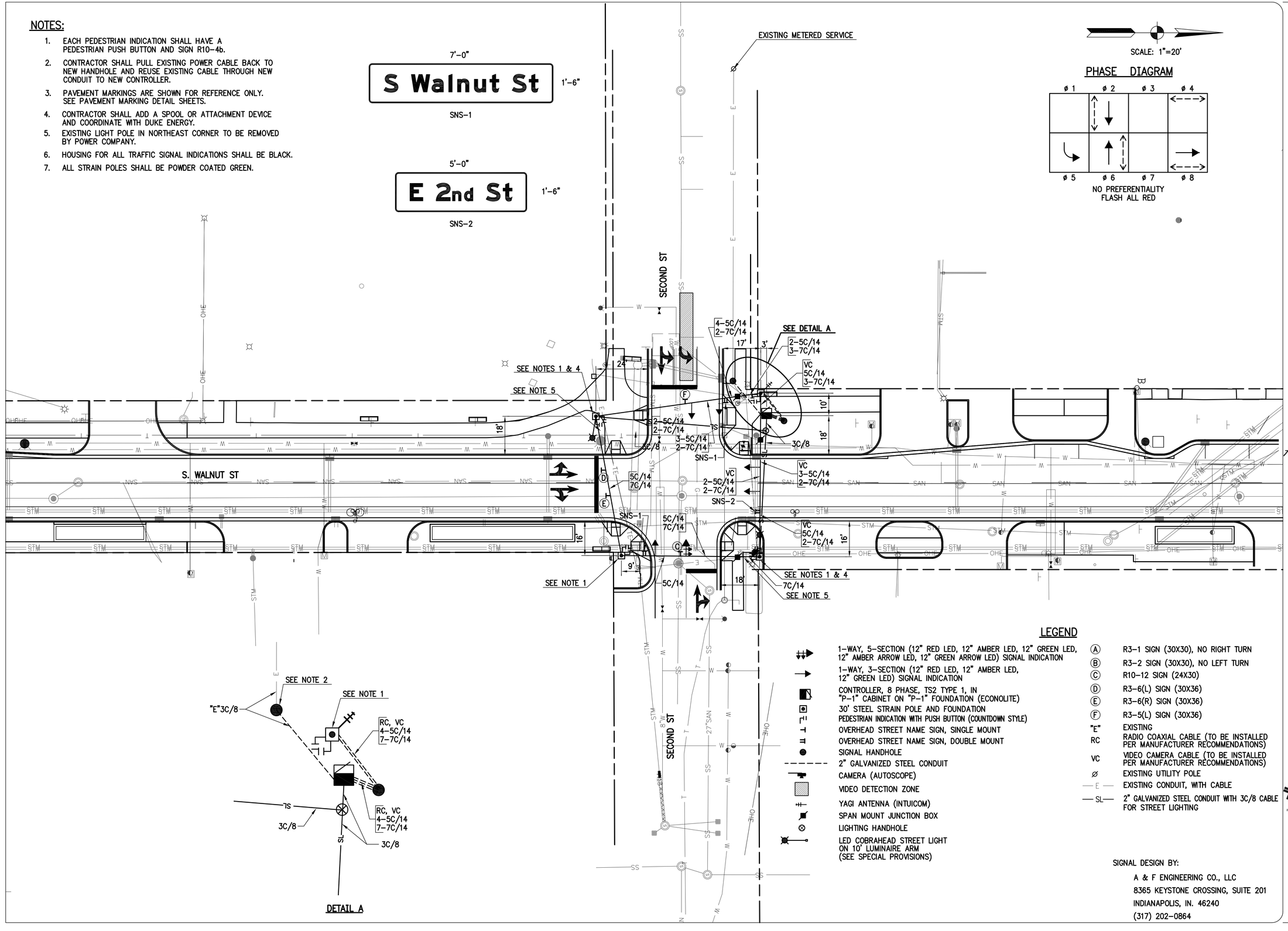
E 2nd St 1'-6"

SNS-2

SCALE: 1"=20'

PHASE DIAGRAM

NO PREFERENTIALITY
FLASH ALL RED



DETAIL A

LEGEND

- 1-WAY, 5-SECTION (12" RED LED, 12" AMBER LED, 12" GREEN LED, 12" AMBER ARROW LED, 12" GREEN ARROW LED) SIGNAL INDICATION
- 1-WAY, 3-SECTION (12" RED LED, 12" AMBER LED, 12" GREEN LED) SIGNAL INDICATION
- CONTROLLER, 8 PHASE, TS2 TYPE 1, IN "P-1" CABINET ON "P-1" FOUNDATION (ECONOLITE)
- 30' STEEL STRAIN POLE AND FOUNDATION
- PEDESTRIAN INDICATION WITH PUSH BUTTON (COUNTDOWN STYLE)
- OVERHEAD STREET NAME SIGN, SINGLE MOUNT
- OVERHEAD STREET NAME SIGN, DOUBLE MOUNT
- SIGNAL HANDHOLE
- 2" GALVANIZED STEEL CONDUIT
- CAMERA (AUTOSCOPE)
- VIDEO DETECTION ZONE
- YAGI ANTENNA (INTUICOM)
- SPAN MOUNT JUNCTION BOX
- LIGHTING HANDHOLE
- LED COBRAHEAD STREET LIGHT ON 10' LUMINAIRE ARM (SEE SPECIAL PROVISIONS)

- (A) R3-1 SIGN (30X30), NO RIGHT TURN
- (B) R3-2 SIGN (30X30), NO LEFT TURN
- (C) R10-12 SIGN (24X30)
- (D) R3-6(L) SIGN (30X36)
- (E) R3-6(R) SIGN (30X36)
- (F) R3-5(L) SIGN (30X36)
- "E" EXISTING
- RC RADIO COAXIAL CABLE (TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS)
- VC VIDEO CAMERA CABLE (TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS)
- EXISTING UTILITY POLE
- —E— EXISTING CONDUIT, WITH CABLE
- —SL— 2" GALVANIZED STEEL CONDUIT WITH 3C/8 CABLE FOR STREET LIGHTING

SIGNAL DESIGN BY:

A & F ENGINEERING CO., LLC
8365 KEYSTONE CROSSING, SUITE 201
INDIANAPOLIS, IN. 46240
(317) 202-0864

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	DSS
Drawn By	DSS
Checked By	JTR
Approved By	JTR
Filename	
Project No.	11340&11721
Project Date	12/2/11

JOSEPH T. RENGEL
REGISTERED
No.10302408
STATE OF INDIANA
PROFESSIONAL ENGINEER

Joseph T Rengel 5-9-11

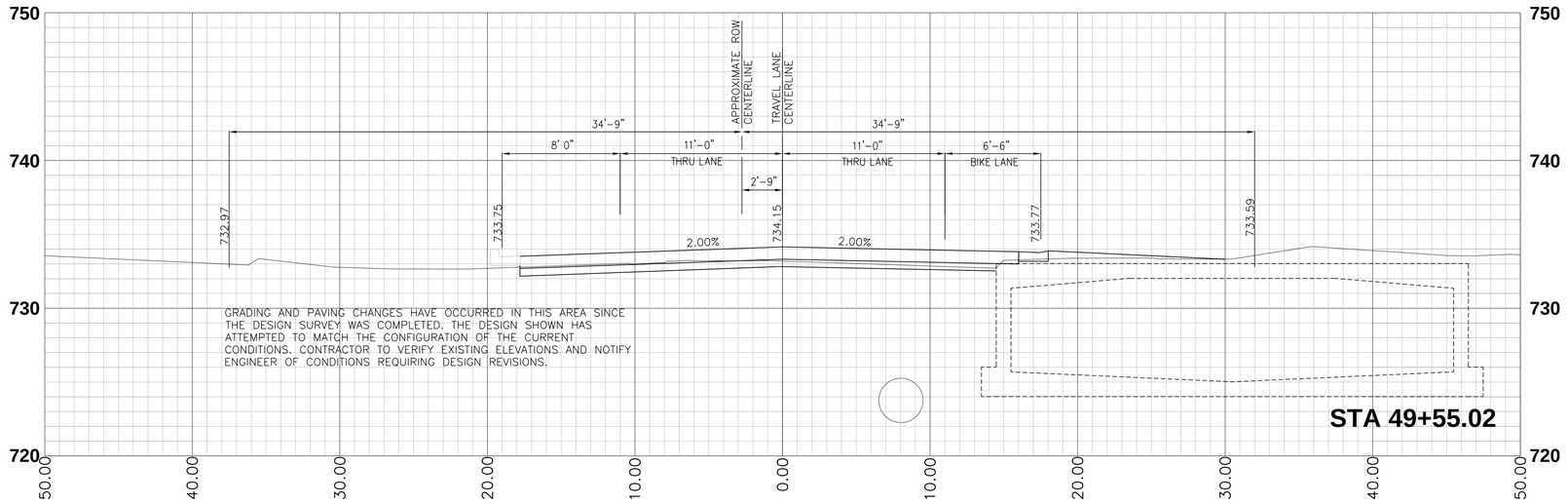
CITY OF BLOOMINGTON
S. WALNUT STREET & SECOND STREET
TRAFFIC SIGNAL MODERNIZATION
BLOOMINGTON, INDIANA

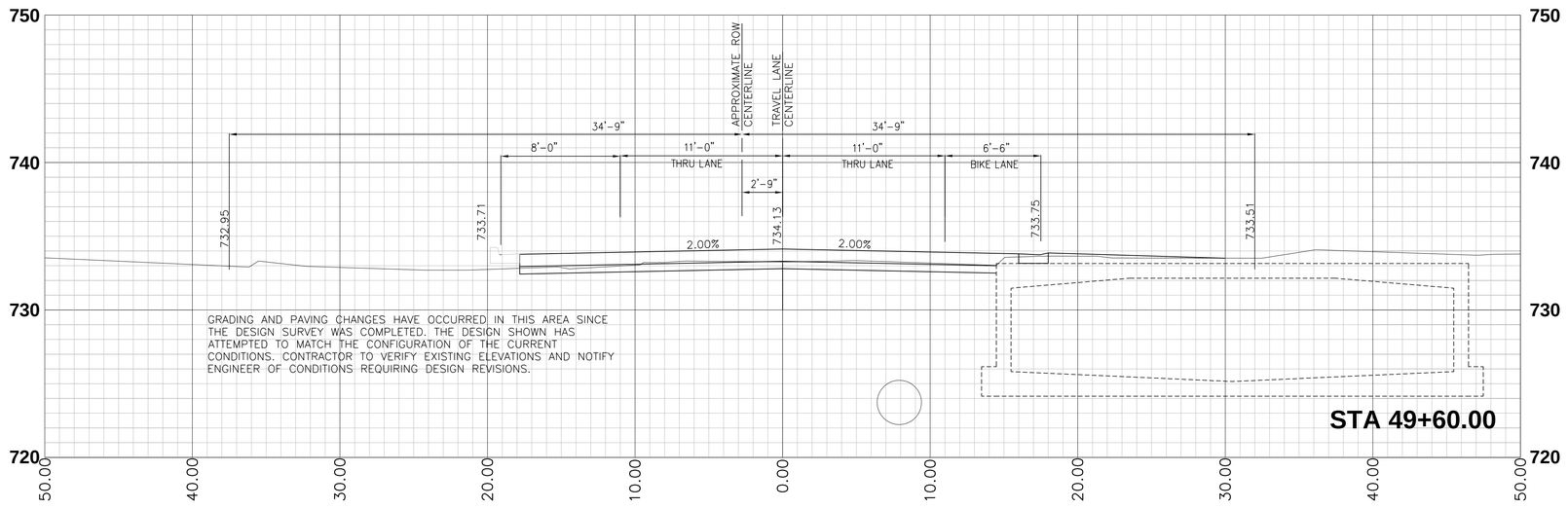
2ND STREET TRAFFIC SIGNAL

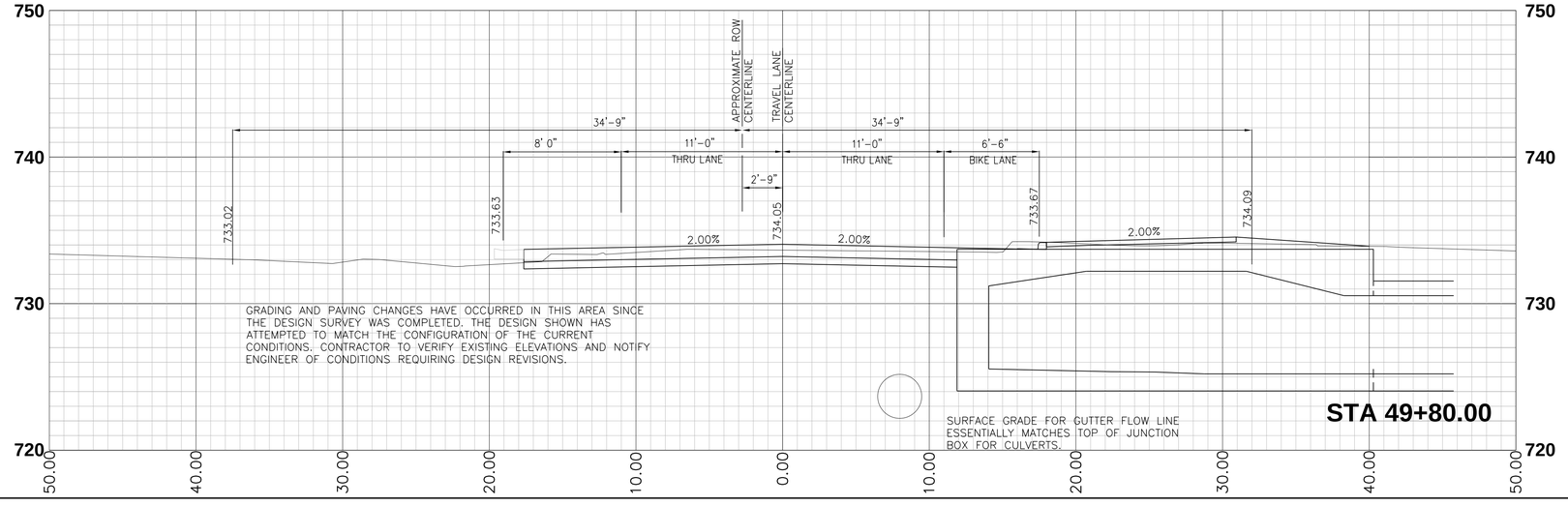
A&F ENGINEERING
Transportation Engineering Services
Growing Order Since 1984
8365 Keystone Crossing, Suite 201, Indianapolis, IN. 46240 (317) 202-0864

DONOHUE & ASSOCIATES

Sheet No.	55
Drawing No.	TS-1







Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	002CS1.DWG
Project No.	11340&11721
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PAUL N. ELLING
REGISTERED
NO.
890275
STATE OF
INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 56

Drawing No. **CS-1**

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
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Project Date	12/2/11

PAUL N. ELLING
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NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

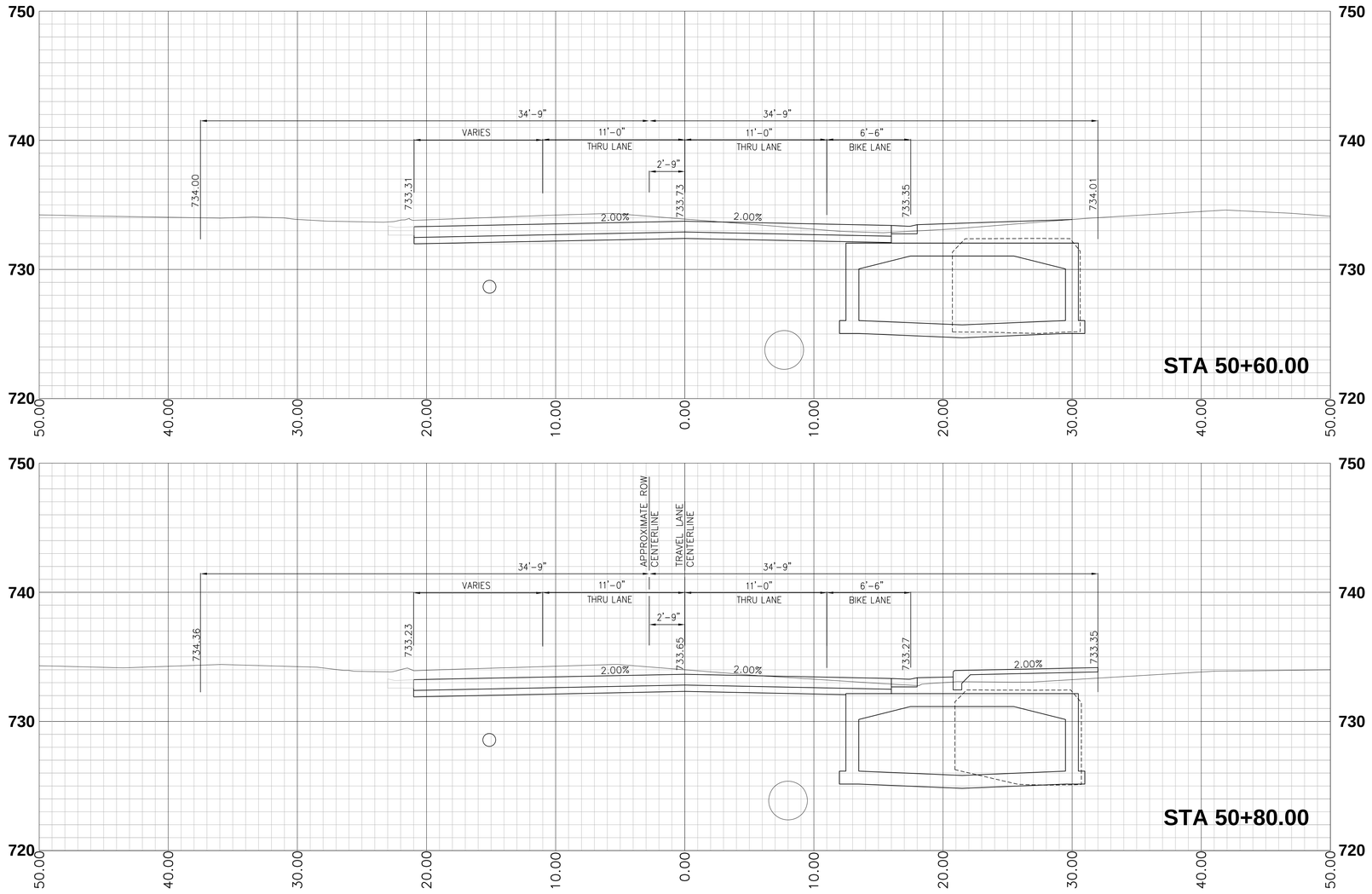
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 57

Drawing No. **CS-2**



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PAUL N. ELLING
REGISTERED
NO. 890275
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12/2/11

CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

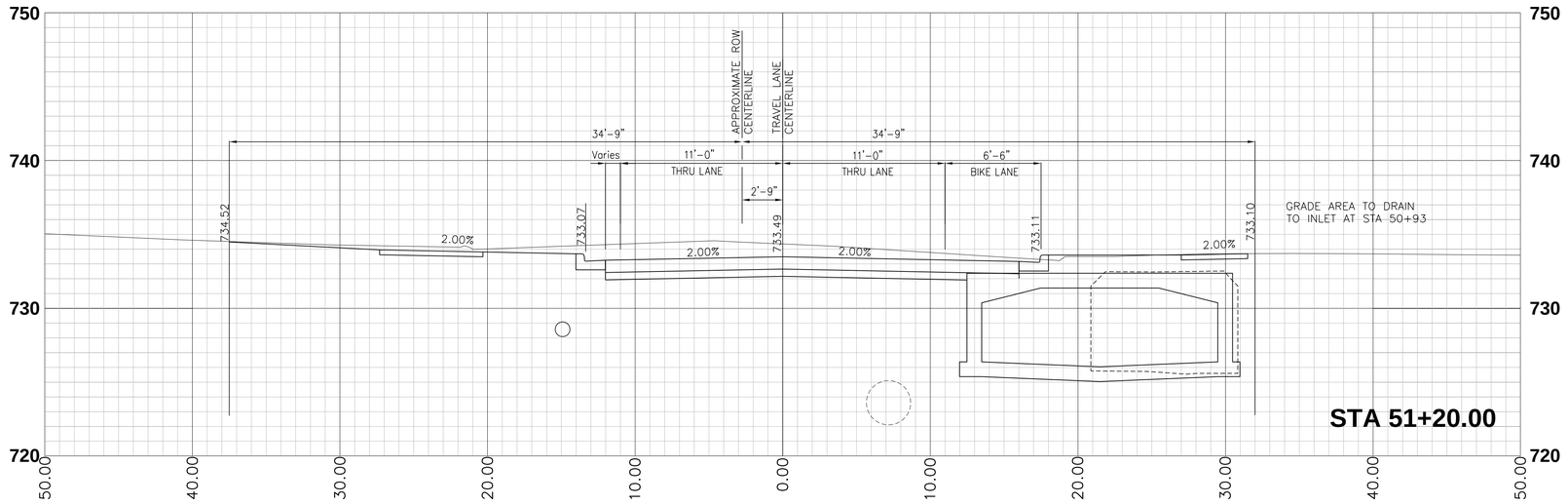
CROSS SECTIONS
ALIGNMENT "A-1"

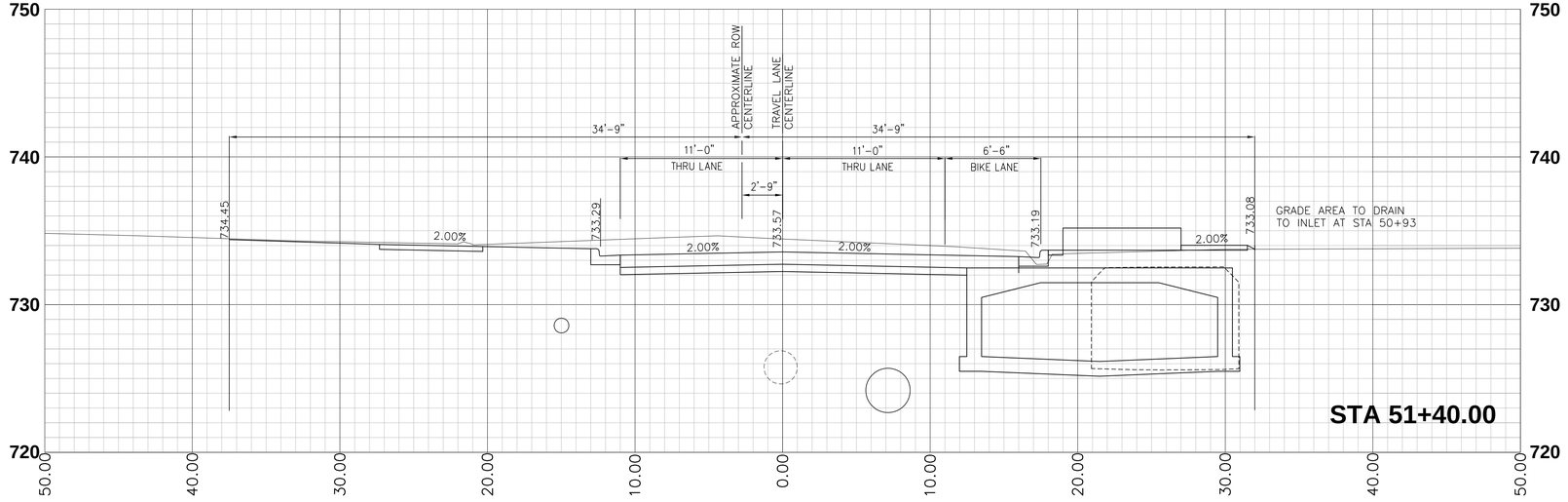
DONOHUE & ASSOCIATES

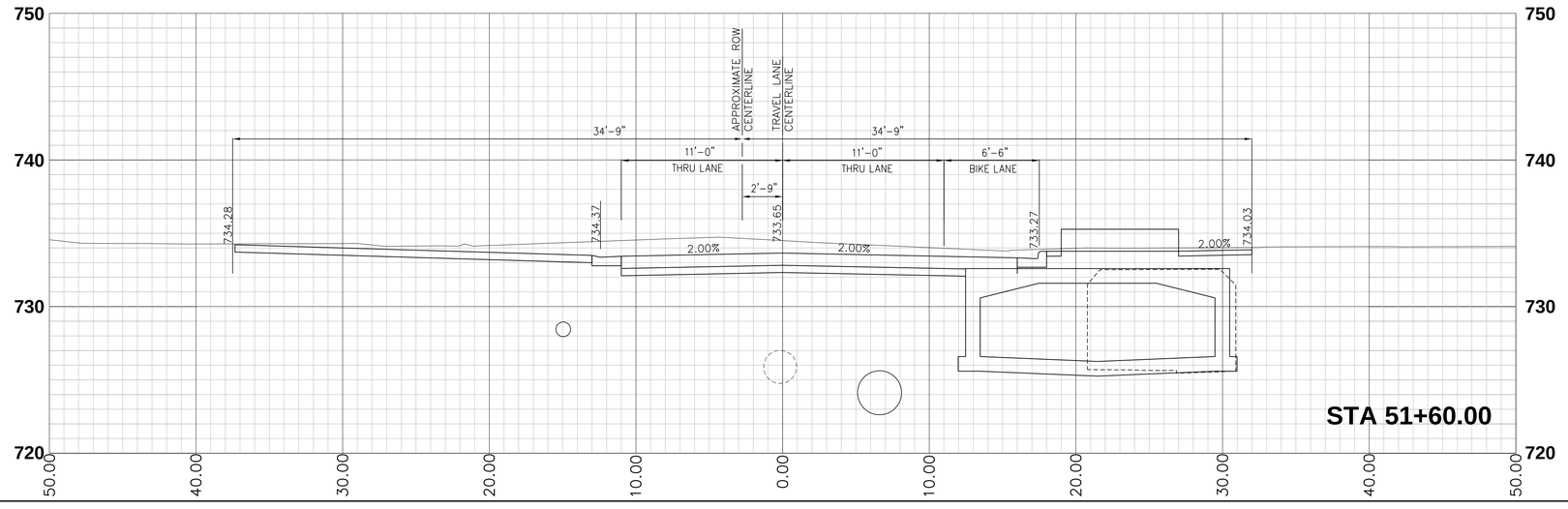
Sheet No. 58

Drawing No.

CS-3







Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	

Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	002CS1.DWG
Project No.	11340&11721
Project Date	12/2/11

PAUL N. ELLING
REGISTERED
NO.
890275
STATE OF
INDIANA
PROFESSIONAL ENGINEER
12/2/11

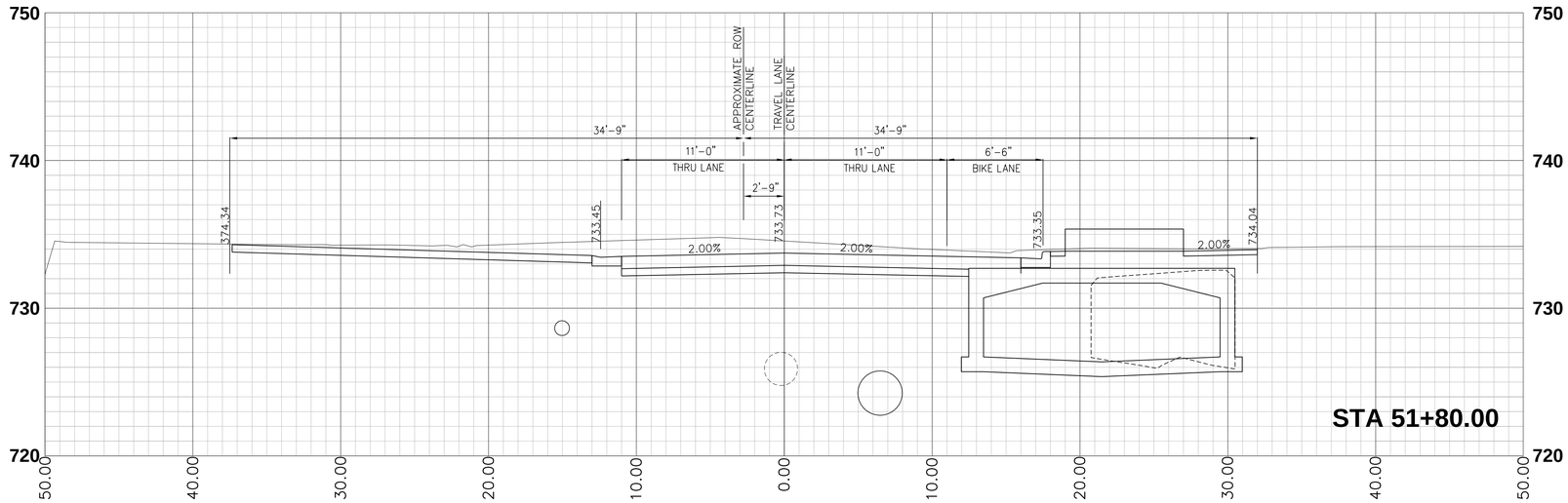
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

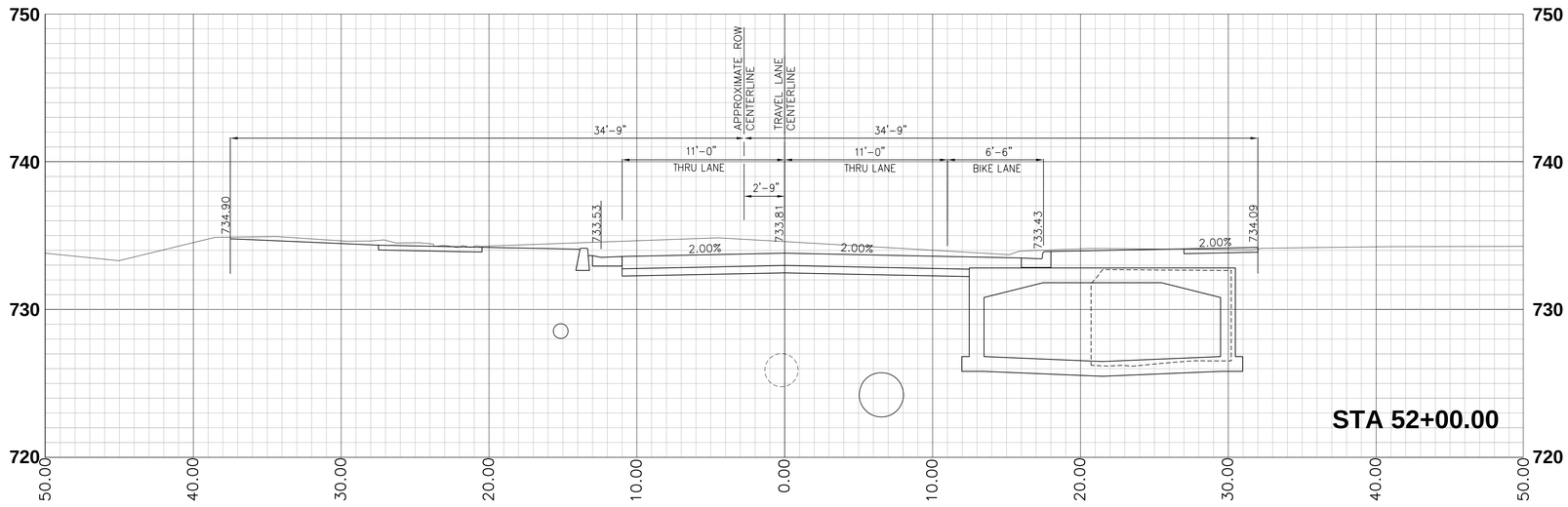
CROSS SECTIONS
ALIGNMENT "A-1"

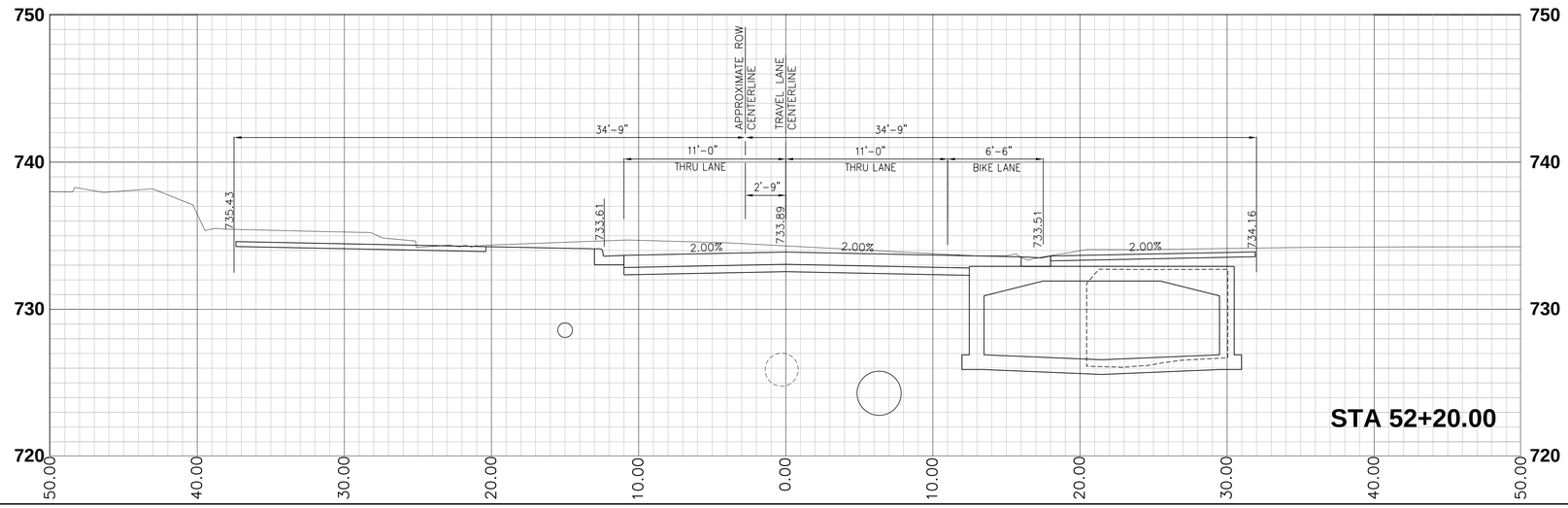
DONOHUE & ASSOCIATES

Sheet No. 59

Drawing No. **CS-4**







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JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

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ALIGNMENT "A-1"

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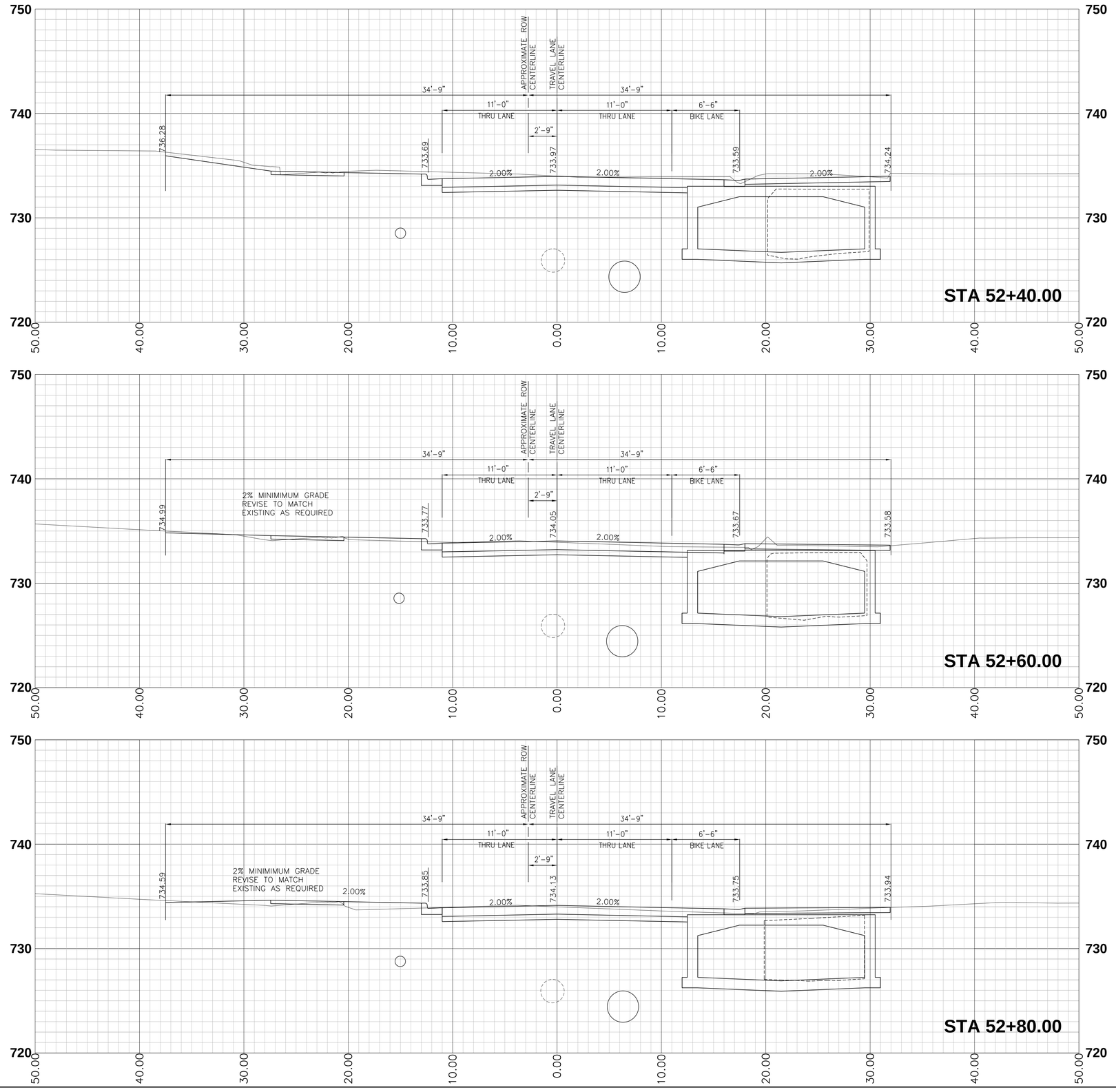
Sheet No. 60

Drawing No. **CS-5**



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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

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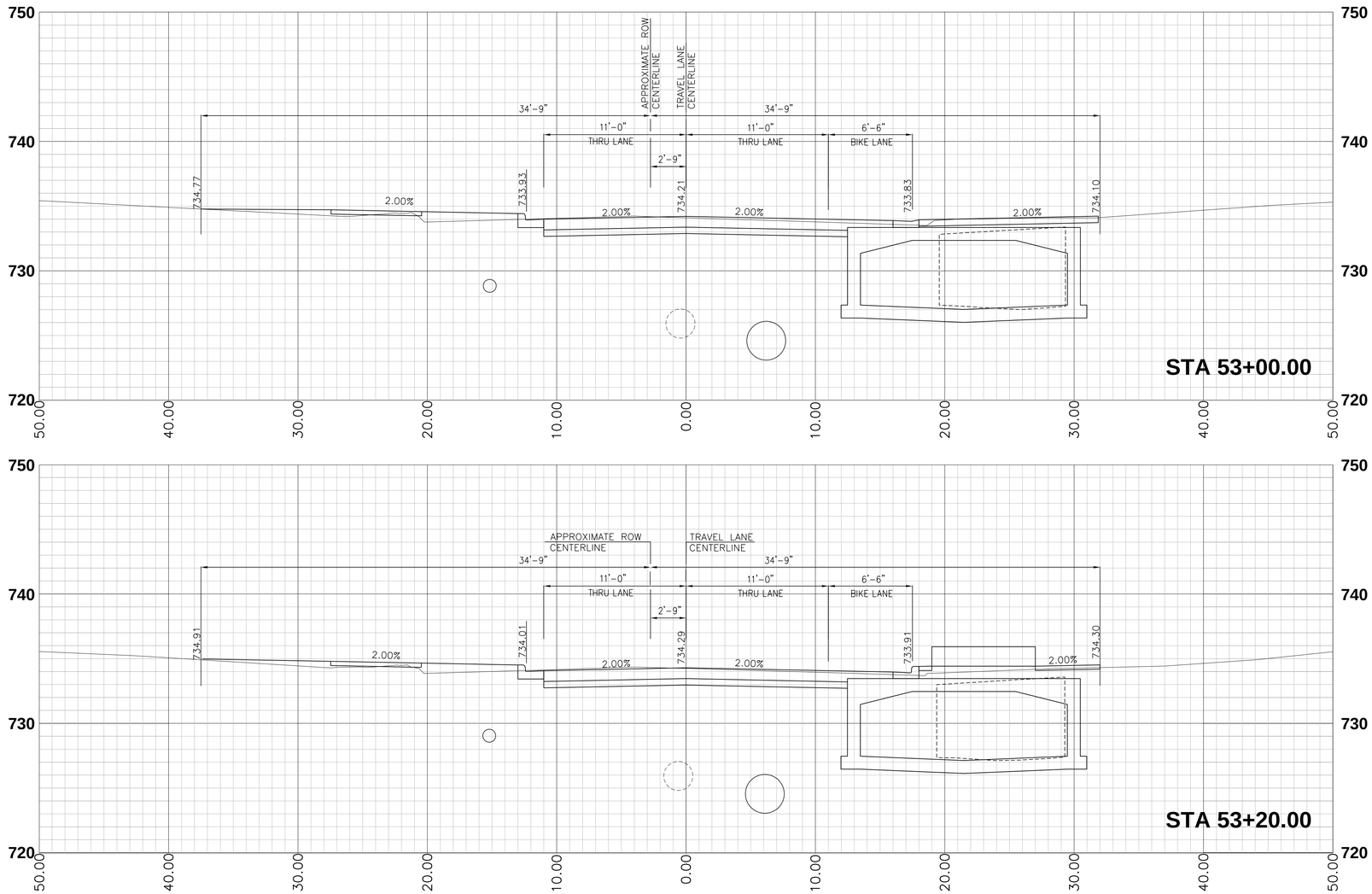
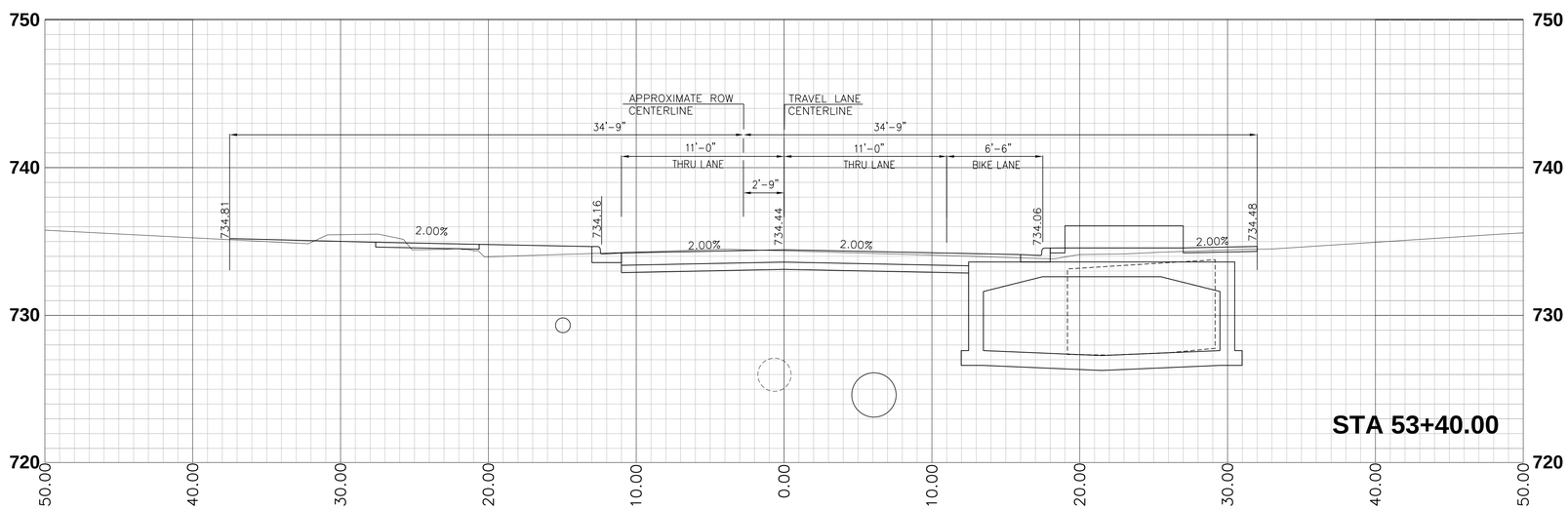
Sheet No. 61

Drawing No. **CS-6**





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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

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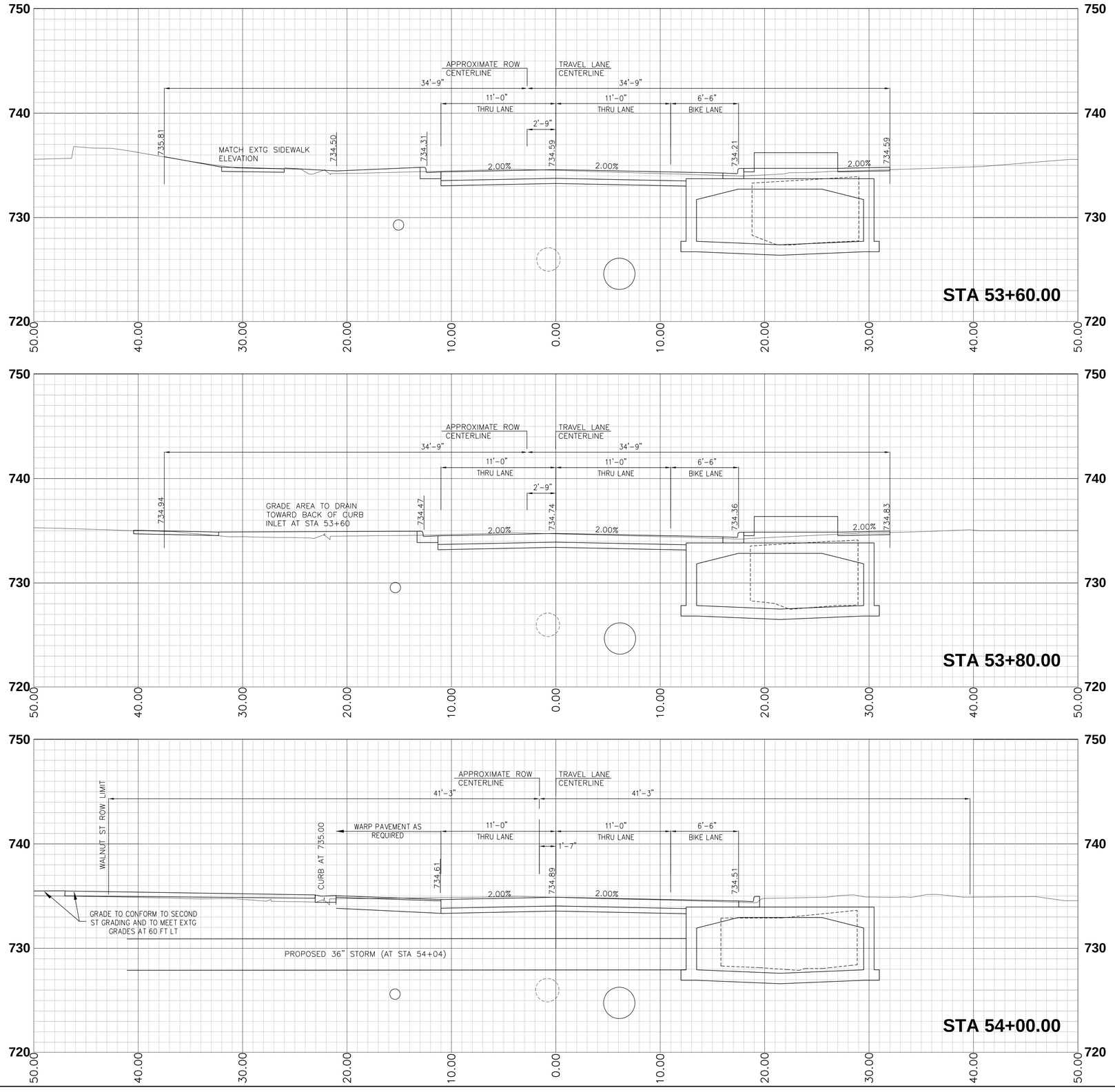
Sheet No. 62

Drawing No. **CS-7**



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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

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Sheet No. 63

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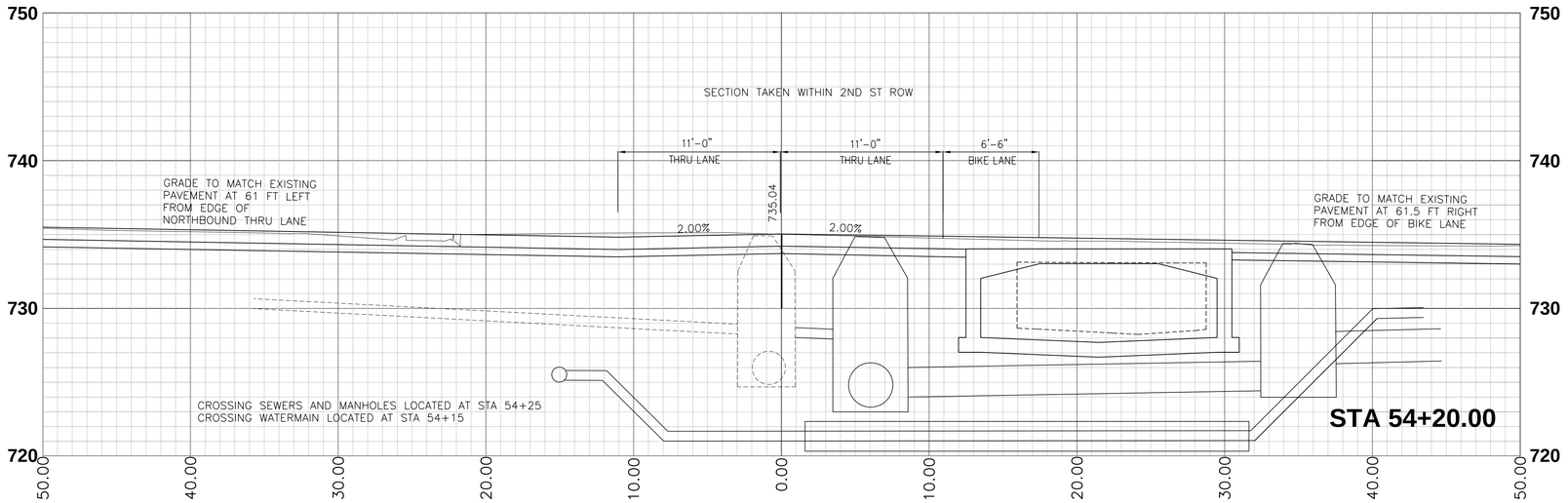

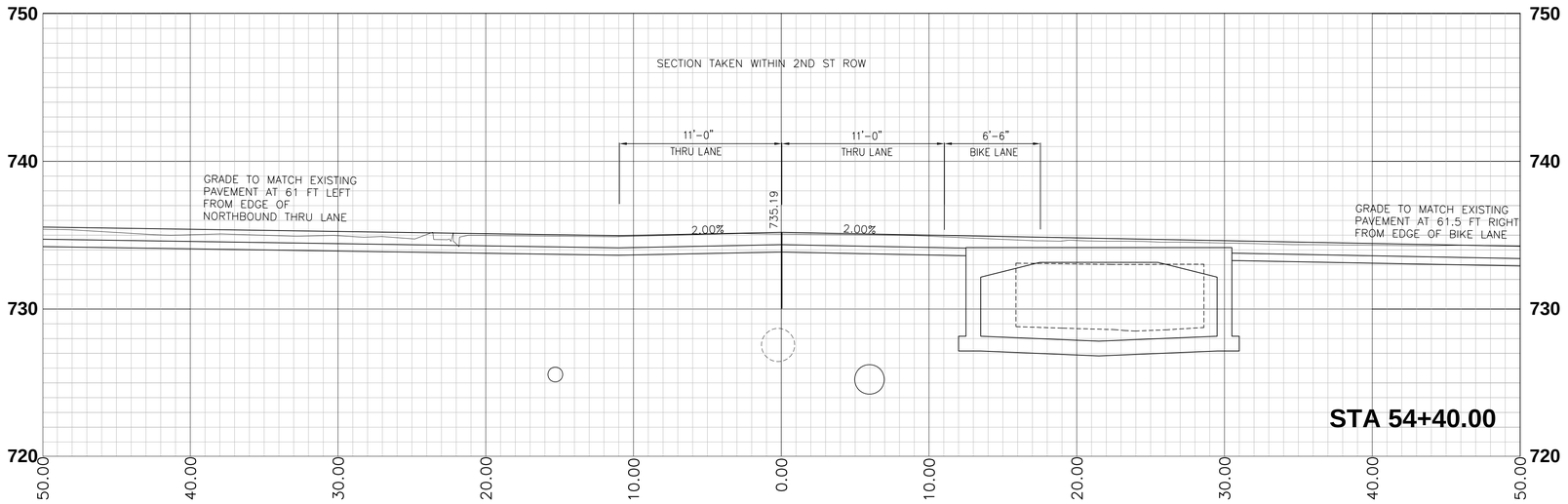

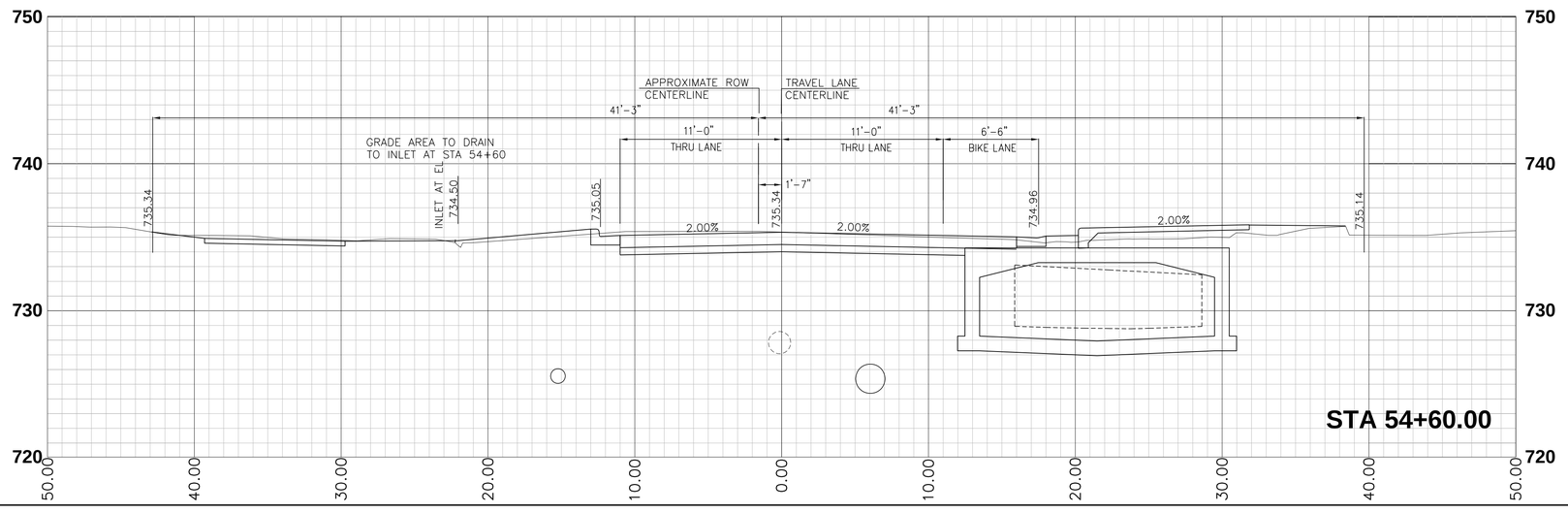

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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
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ALIGNMENT "A-1"

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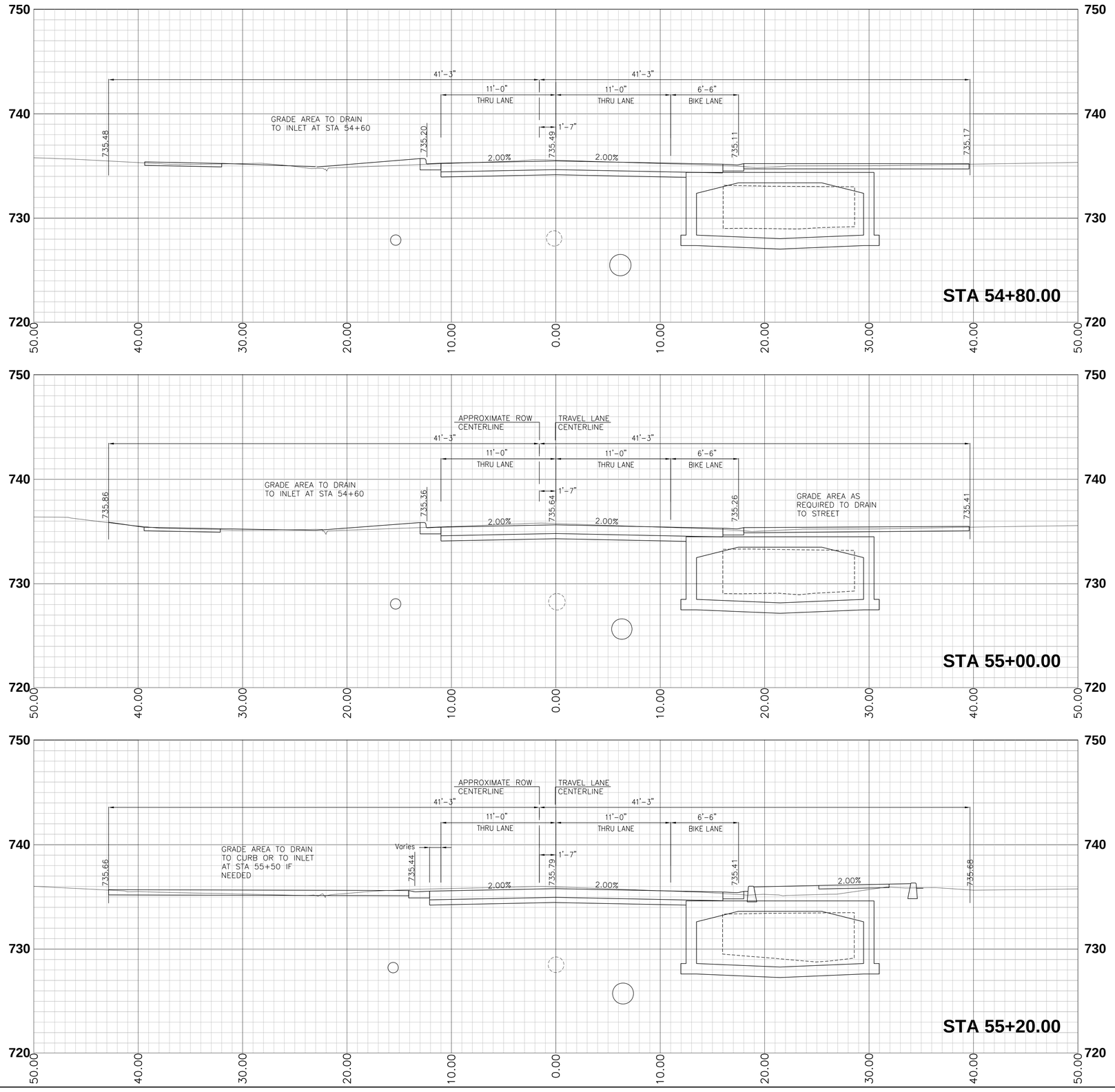
Sheet No. 64

Drawing No. **CS-9**



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JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 65

Drawing No. **CS-10**

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JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
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ALIGNMENT "A-1"

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Sheet No. 66

Drawing No. **CS-11**

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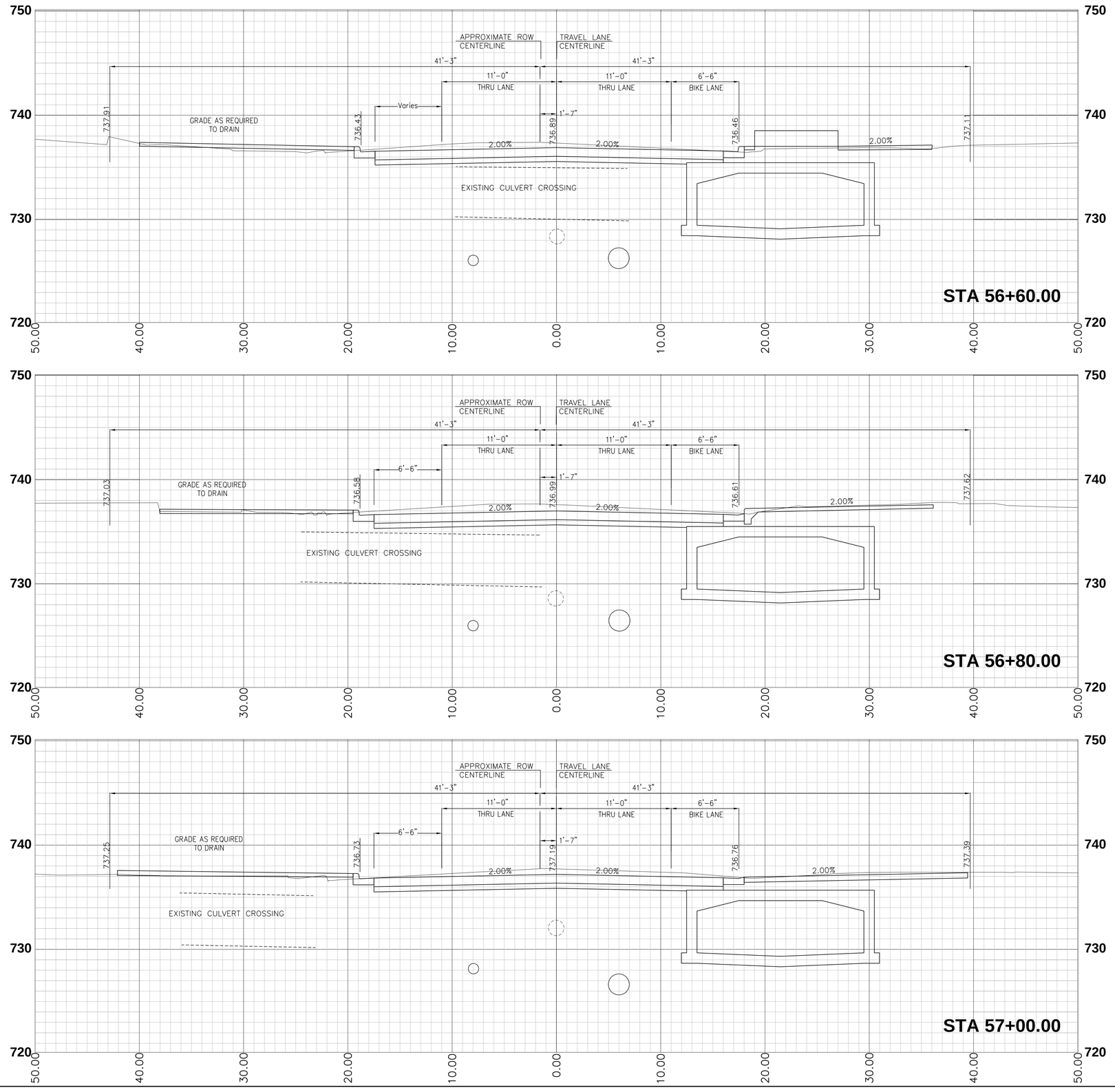
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 67

Drawing No. **CS-12**



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JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
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DONOHUE & ASSOCIATES

Sheet No. 68

Drawing No.

CS-13

Designed By	BDB
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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

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Sheet No. 69

Drawing No. **CS-14**

Designed By	BDB
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Revision Number | Revision Description | Drawn By | Checked By | Date

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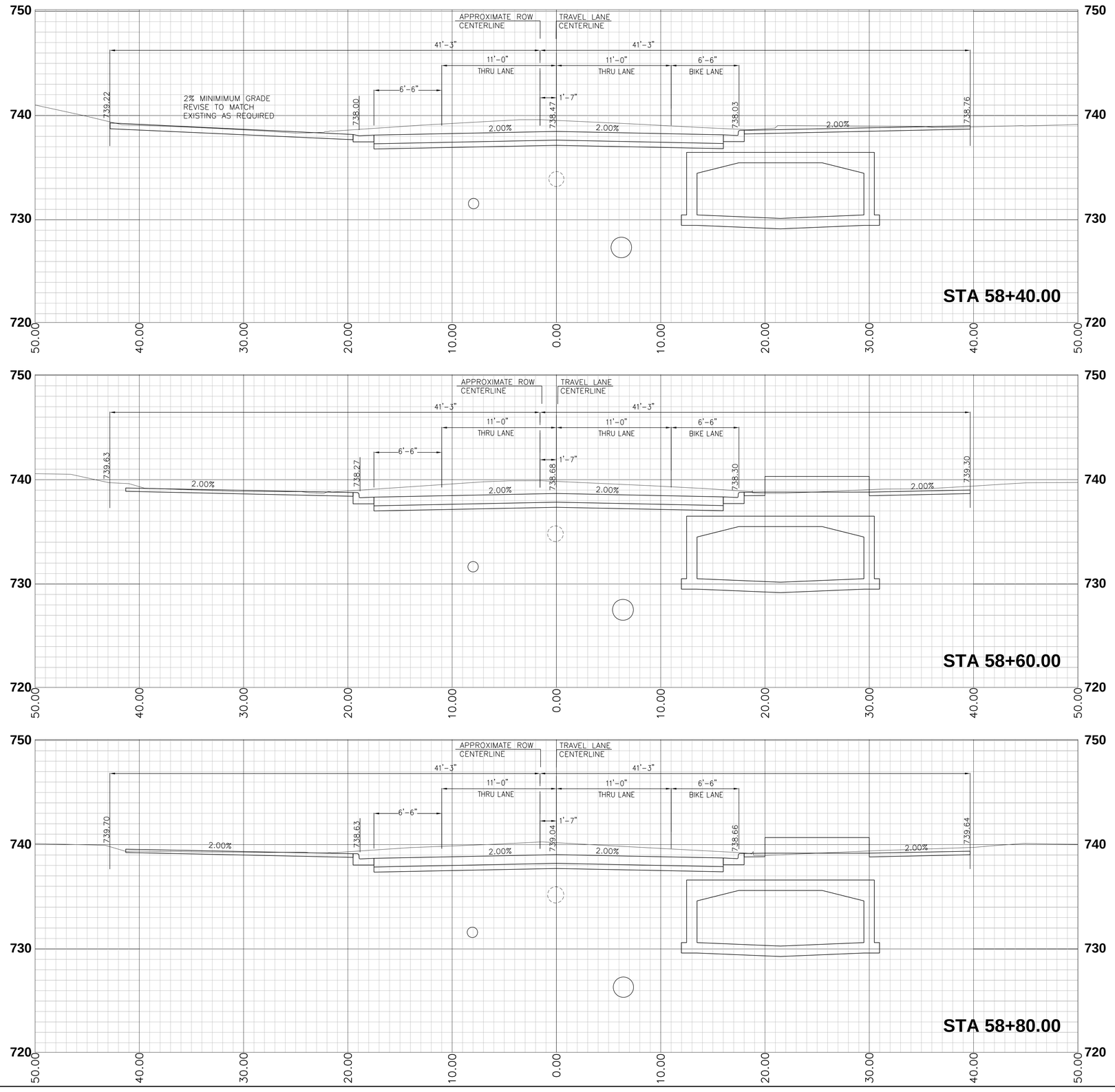
CITY OF BLOOMINGTON
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 70

Drawing No. **CS-15**



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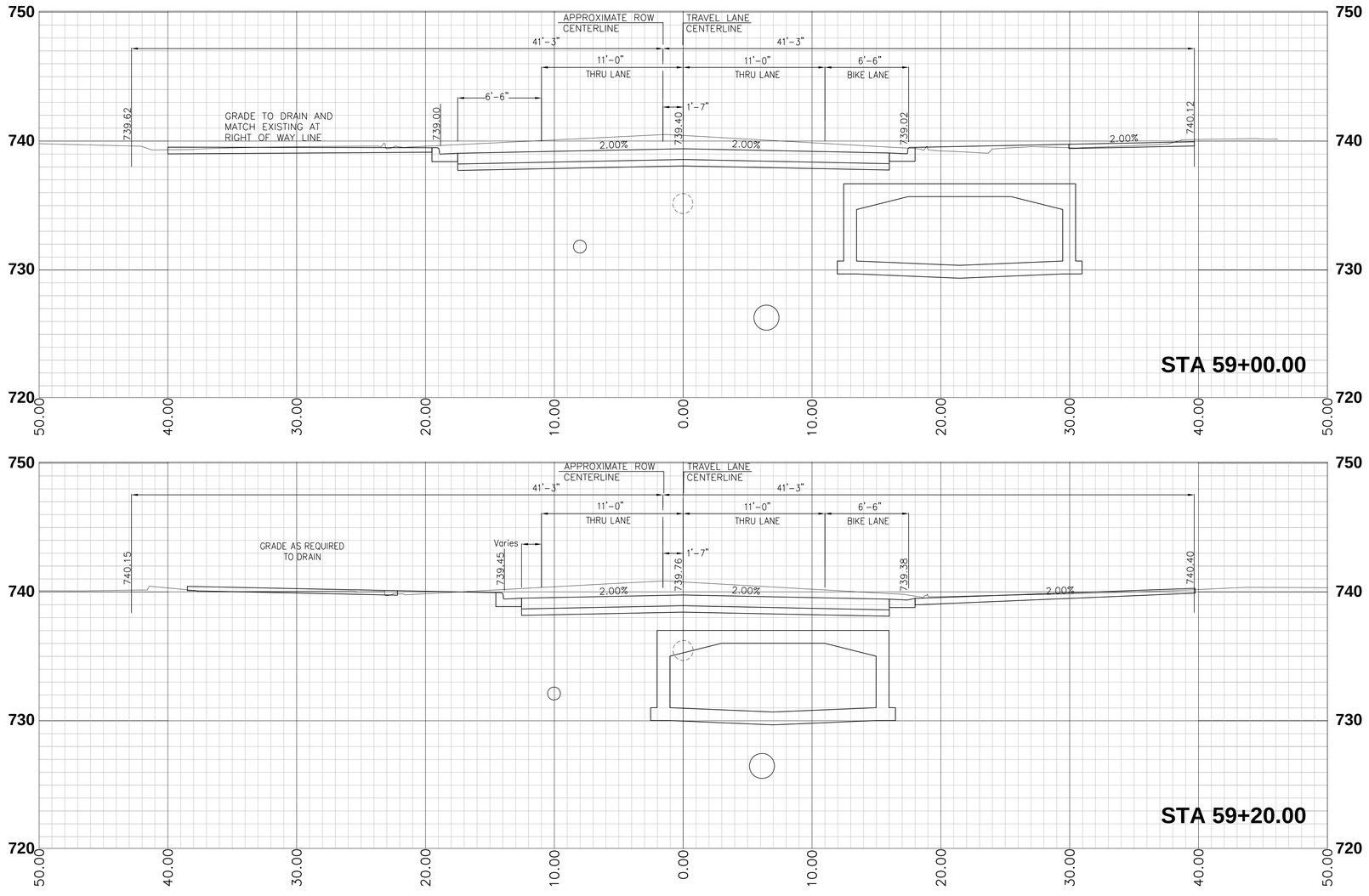
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

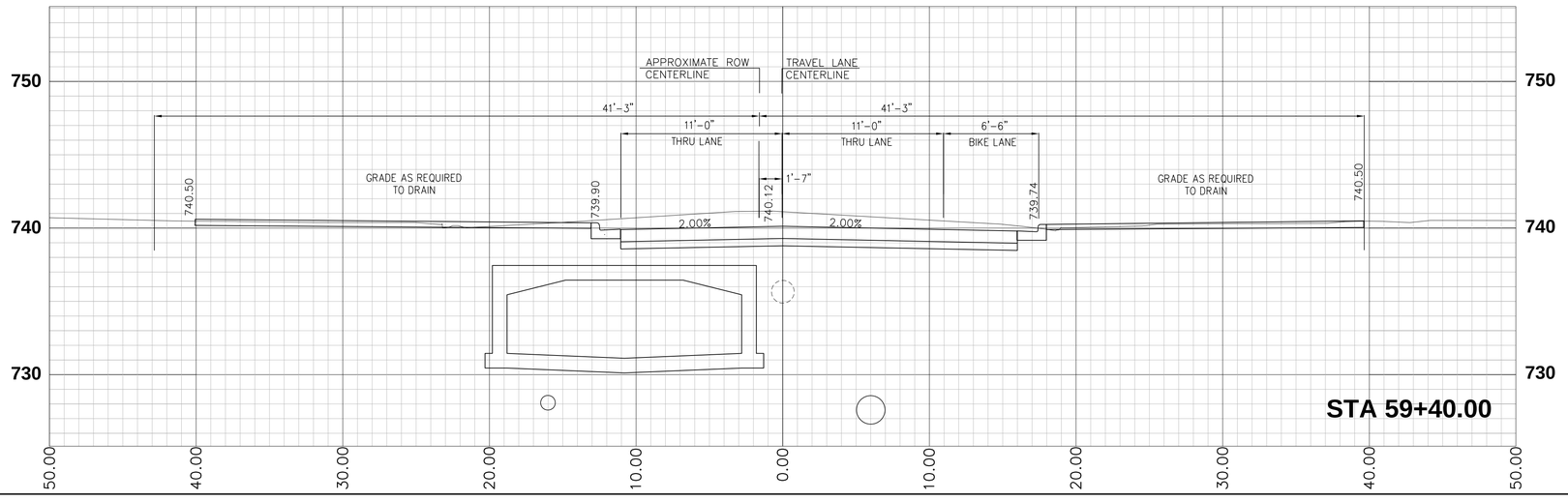
CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 71

Drawing No. **CS-16**





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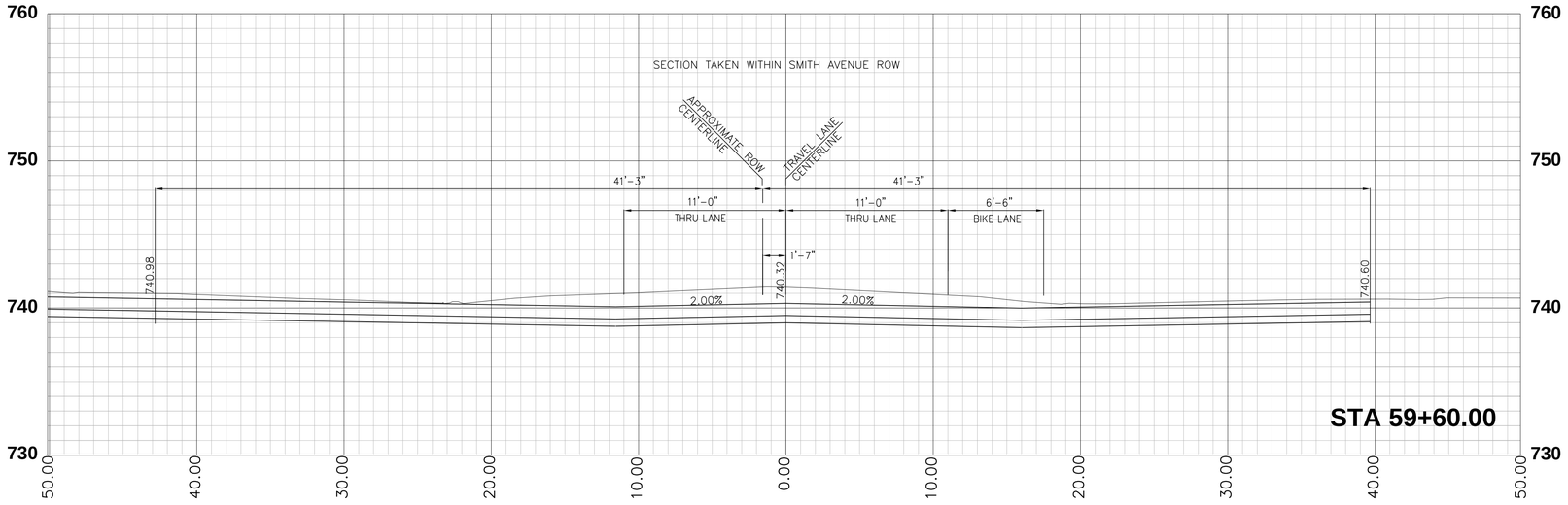
JORDAN RIVER AND LOWER SPANKERS STORM CULVERT
RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

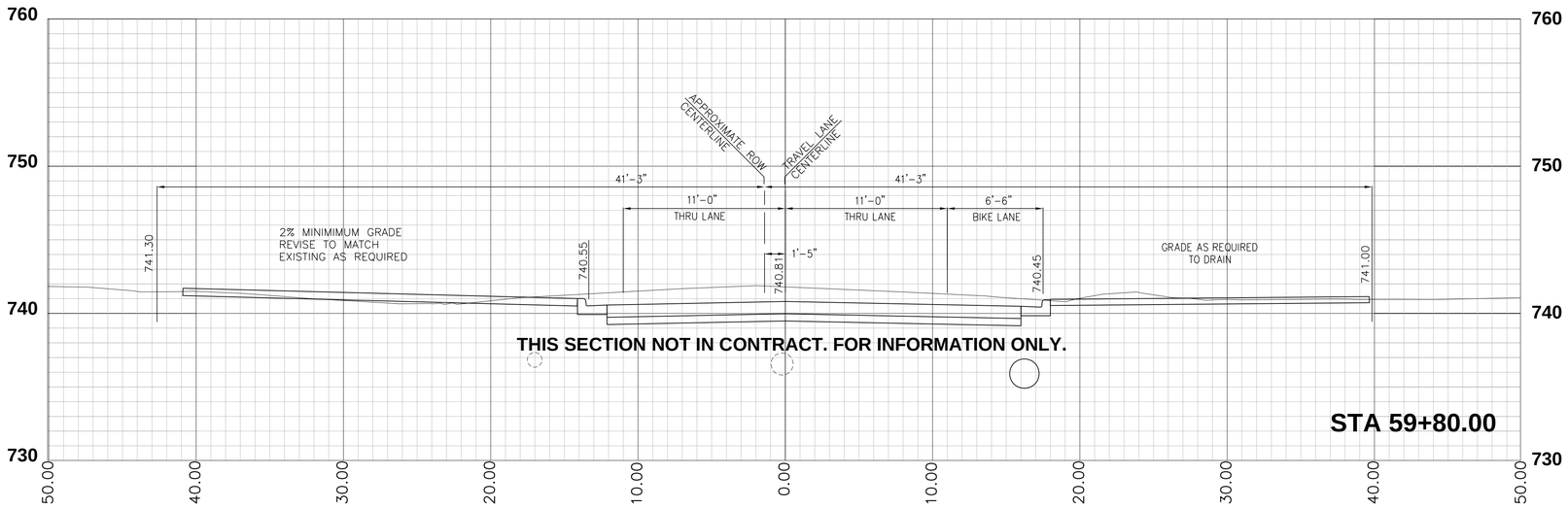
CROSS SECTIONS
ALIGNMENT "A-1"

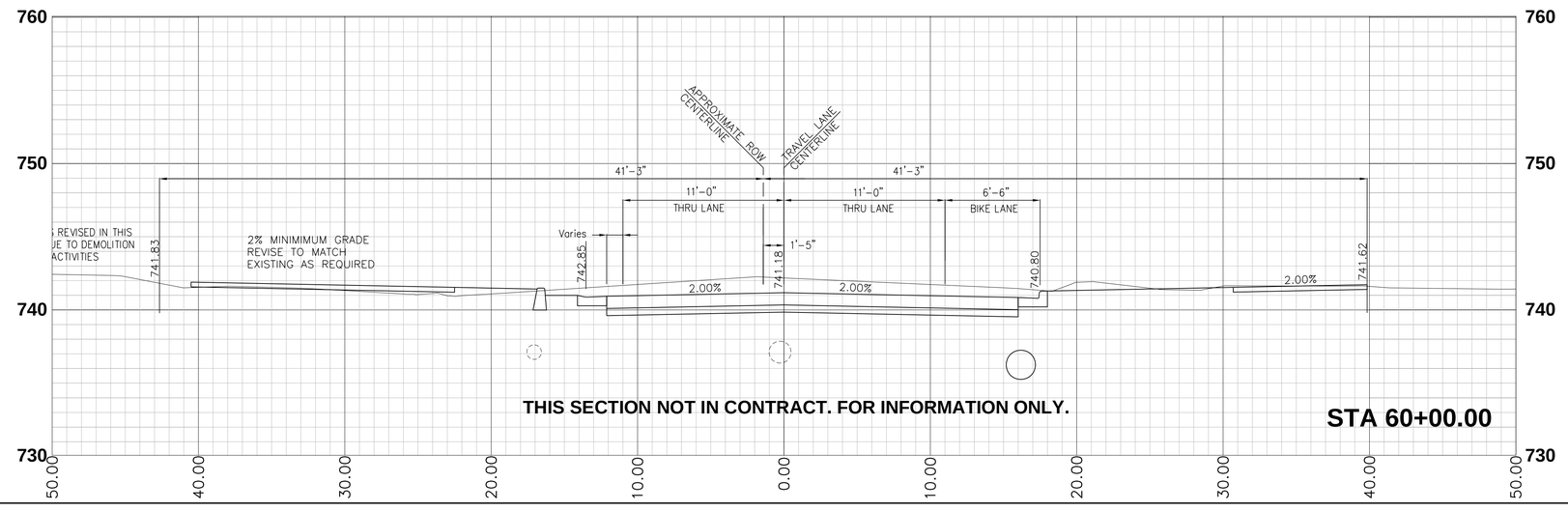
DONOHUE & ASSOCIATES

Sheet No. 72

Drawing No. **CS-17**







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RECONSTRUCTION AND STREETSCAPE - CONTRACT A
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

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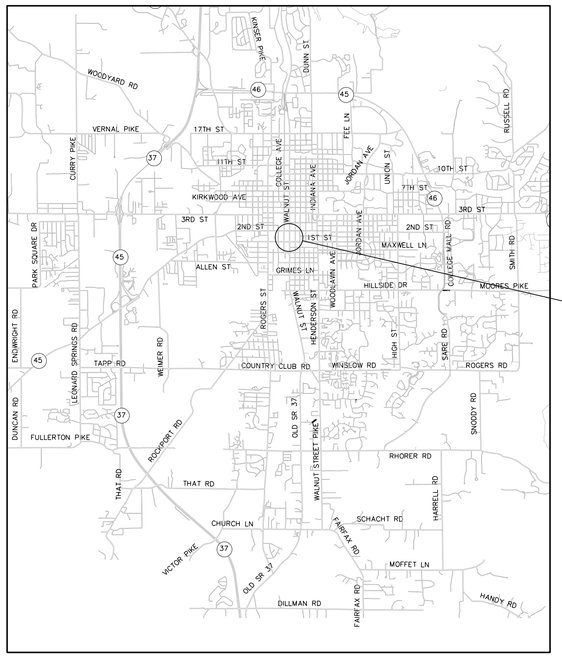
Sheet No. 73

Drawing No.

CS-18

CITY OF BLOOMINGTON
WALNUT STREETSCAPE PROJECT
CONTRACT B

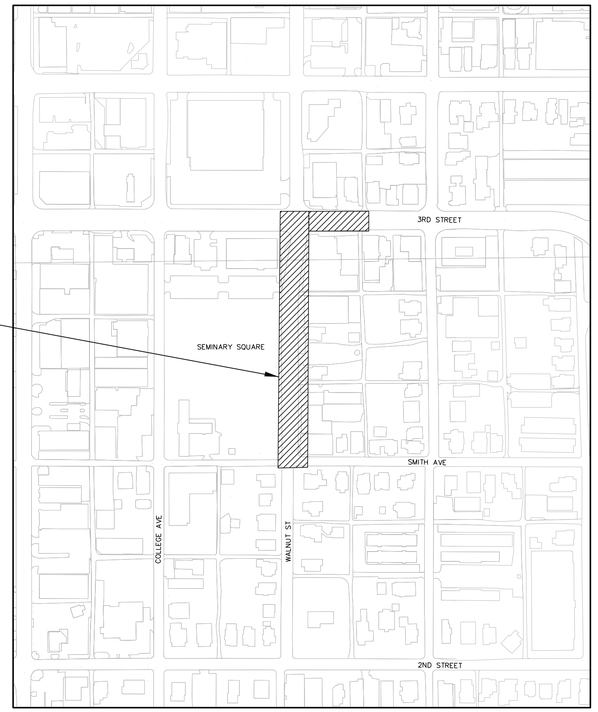
BLOOMINGTON, INDIANA
DECEMBER 2, 2011



PROJECT LOCATION MAP

SCALE: N.T.S

PROJECT



PROJECT SITE MAP

SCALE: N.T.S.

DRAWING NO.	SHEET NO.	TITLE
–	1	TITLE SHEET
G1–G2	2–3	GENERAL NOTES / LEGEND
L1	4	SITE LAYOUT AND GEOMETRICS
R1–R2	5–6	REMOVAL PLANS
P1–P2	7–8	STORM SEWER PLANS AND PROFILES
SR1–SR2	9–10	SURFACE RESTORATION PLANS
PJ1–PJ2	11–12	PAVEMENT JOINTING AND STREET LIGHTING
M1–M4	13–16	MISCELLANEOUS DETAILS
T1–T2	17–18	MAINTENANCE OF TRAFFIC PLAN
TS1	19	TRAFFIC SIGNAL IMPROVEMENTS
X1–X11	20–30	CROSS SECTIONS

CERTIFIED: Paul N. Elling

DATE: 12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

PREPARED BY

DONOHUE & ASSOCIATES

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PROJECT NOS.....CBU D00–19 & D00–23

PREPARED FOR

CITY OF BLOOMINGTON
UTILITIES - STORM IMPROVEMENTS
PUBLIC WORKS - WALNUT STREET STREETSCAPE

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AMERITECH
4517 E INDIANA BELL CT
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DUKE ENERGY
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600 EAST MILLER DRIVE
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TOPOGRAPHIC NOTES

THE TOPOGRAPHIC MAPPING IS BASED ON GROUND SURVEY PERFORMED DURING SEVERAL TIME PERIODS. THE VERY SOUTHERN PORTION OF THE PROJECT AREA WAS SURVEYED IN THE SUMMER OF 2000 FOR THE CULVERT REPLACEMENT PROJECT INCLUDED IN CONTRACT A. AN ADDITIONAL SURVEY FOR THE CULVERT PROJECT IN CONTRACT A WAS PERFORMED IN THE SUMMER OF 2008 TO SUPPLEMENT THE ORIGINAL SURVEY. SURVEY WORK PERFORMED FOR STREETSCAPE IMPROVEMENTS WAS ALSO PERFORMED IN 2008 AND WAS INCORPORATED INTO THE DRAWINGS IN 2009 COVERING THE MAJORITY OF THE PROJECT AREA CONTAINED IN THIS CONTRACT. DISCREPANCIES BETWEEN THE VARIOUS SURVEY DATUMS WERE NOTED AND THE DATUMS WERE ADJUSTED TO THE ORIGINAL 2000 SURVEY TO CREATE THE DRAWINGS SHOWN. THE DRAWINGS WERE FURTHER ADJUSTED FOR OBSERVED FIELD CHANGES DUE TO DEVELOPMENT ACTIVITIES. DUE TO THE AGE OF SOME OF THE DATA AND DIFFERING SOURCES OF SURVEY DATA, IT IS POSSIBLE THAT DISCREPANCIES BETWEEN CURRENT CONDITIONS AND THESE DRAWINGS EXIST IN SOME LOCATIONS.

CONTRACTOR SHALL CONFIRM PROJECT BENCHMARKS, ELEVATIONS, AND EXISTING CONDITIONS WITHIN THE PROJECT AREA PRIOR TO COMMENCING FIELD ACTIVITIES AND CONTACT THE ENGINEER FOR DIRECTION IF SIGNIFICANT DISCREPANCIES ARE DISCOVERED. CONTRACTOR IS FURTHER ADVISED THAT DEVELOPMENT ACTIVITIES HAVE OCCURRED IN THE VICINITY OF SEVERAL BENCHMARKS AND CONTROL POINTS WHICH MAY HAVE RENDERED THOSE BENCHMARKS INACCURATE.

THIS PROJECT IS INTENDED TO REDEVELOP THE WALNUT STREET CORRIDOR AND MUST MATCH EXISTING CONDITIONS AT THE STREET RIGHT-OF-WAY LINES OR AT THE EASEMENT LIMITS AS APPROPRIATE. ACCORDINGLY FIELD ALTERATIONS SHOULD BE ANTICIPATED TO BE REQUIRED IN SOME LOCATIONS BY THE CONTRACTOR TO ADJUST THE FINAL ELEVATIONS AND LOCATIONS OF PROJECT FEATURES TO CONFORM TO THE EXISTING CONDITIONS.

GENERAL NOTES

WORK DESCRIPTION: THIS PROJECT INCLUDES THE CONSTRUCTION OF NEW STORM SEWERS CONNECTED TO THE PROPOSED BOX CULVERT CONSTRUCTED UNDER CONTRACT A AND RECONSTRUCTION OF PAVEMENT, DRIVEWAYS, CURBING, SIDEWALKS, TREES, STREET LIGHTING, PLANTERS, AND BENCHES AS WELL AS INCIDENTAL WORK TO CONFORM TO A STREETSCAPE PLAN DEVELOPED FOR THE PROJECT.

EXISTING UTILITIES: EXISTING BURIED UTILITIES SHOWN IN PLAN AND PROFILE ARE SHOWN IN ACCORDANCE WITH THE AVAILABLE RECORDS AND FIELD INFORMATION AVAILABLE TO THE ENGINEER. OTHER UTILITIES MAY ALSO BE PRESENT. IT IS ANTICIPATED THAT NUMEROUS BURIED UTILITY LINES ARE LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND COORDINATING WITH THE OWNERS OF THE EXISTING UTILITIES TO DETERMINE THE LOCATION OF THEIR BURIED FACILITIES. THE CONTRACTOR SHALL LOCATE IN PLAN AND ELEVATION ALL UTILITIES WHICH MAY IMPACT THE PROJECT WORK AT LEAST 2 WEEKS IN ADVANCE OF CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF REVISIONS TO THE PROPOSED WORK ARE NEEDED AND TO PROVIDE TIME FOR THE UTILITY OWNERS TO RELOCATE THEIR FACILITIES. DELAY OF CONSTRUCTION CLAIMS WILL NOT BE APPROVED WHICH RESULT FROM FAILURE TO PROPERLY IDENTIFY UTILITIES IN PLAN AND ELEVATIONS SUFFICIENTLY IN ADVANCE OF CONSTRUCTION ACTIVITIES.

BYPASS PUMPING AND FLOW CONTROL: THE CONTRACTOR SHALL MAKE PROVISIONS TO MAINTAIN FLOWS IN ALL SANITARY AND STORM SEWERS OR CULVERTS AT ALL TIMES INCLUDING WET WEATHER CONDITIONS. BYPASS PUMPING OR OTHER FLOW CONTROLS ARE EXPECTED TO BE REQUIRED AT CERTAIN TIMES AND ARE TO BE ANTICIPATED IN THE CONTRACTORS COSTS. CITY WILL NOT BE LIABLE FOR ANY COSTS OR DAMAGES INCURRED, OR FINES IMPOSED, FOR FAILURE TO PROVIDE ADEQUATE BYPASS PUMPING OR FLOW CONTROL.

MAINTENANCE OF TRAFFIC (VEHICULAR AND PEDESTRIAN): CONTINUOUS MAINTENANCE OF ACCESS TO BUSINESS AND RESIDENCES SHALL BE PROVIDED ALONG WITH PROTECTION OF THE PUBLIC FROM CONSTRUCTION ACTIVITIES AT ALL TIMES. THE DRAWINGS IDENTIFY THE MINIMUM VEHICULAR TRAFFIC MAINTENANCE REQUIREMENTS INCLUDING THE ESTABLISHMENT OF DETOUR ROUTES. PEDESTRIAN ACCESS TO ALL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AND MAY INCLUDE THE NEED TO DEVELOP TEMPORARY WALKWAYS OVER EXCAVATIONS TO THE ENTRANCES OF BUILDINGS WHEN ALTERNATE ACCESS POINTS ARE NOT AVAILABLE. IN ISOLATED INSTANCES, ACCESS MAY BE TEMPORARILY INTERRUPTED ONLY WITH THE CONSENT OF THE CITY AND PROPERTY OWNER. SUCH TEMPORARY INTERRUPTIONS WILL BE CONSIDERED ON A CASE BY CASE BASIS AND SHALL NOT EXCEED 24 HOURS DURATION. CONSTRUCTION AT 3RD STREET WILL REQUIRE THE REMOVAL OF TRAFFIC SIGNAL WIRING AND TRAFFIC SIGNAL MASTARMS. THE CONTRACTOR SHALL REMOVE, STORE, PROVIDE TEMPORARY SIGNALS, POLES, AND WIRING AS REQUIRED, AND REINSTALL ALL SIGNALS, WIRING AND MASTARMS WHEN CONSTRUCTION IS COMPLETE.

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED FOR THIS PROJECT IN ACCORDANCE WITH THE REQUIREMENTS OF BLOOMINGTON. BY ENTERING INTO A CONTRACT TO PERFORM WORK ON THIS PROJECT CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE REQUIRED TO COMPLY WITH THE SWPPP AND PROPERLY OPERATE, INSPECT AND MAINTAIN THE FEATURES TO MAINTAIN COMPLIANCE WITH THE SWPPP AND THE STATE AND LOCAL STORMWATER PERMITS. CONTRACTOR SHALL IMMEDIATELY CORRECT ANY DEFICIENCIES NOTED BY AUTHORITIES AT HIS COST IN ORDER TO MAINTAIN COMPLIANCE WITH THE SWPPP AND REQUIRED PERMITS.

EXISTING SIGNS: CONTRACTOR IS TO CONTACT CITY TRAFFIC DIVISION (DEREK NEFF AT 812-349-3452) TO HAVE ALL CITY OWNED SIGNS REMOVED AFTER CONTRACTOR INSTALLS CONSTRUCTION SIGNS BUT PRIOR TO DEMOLITION WORK COMMENCING. CITY WILL REINSTALL PERMANENT TRAFFIC CONTROL SIGNS WHEN CONSTRUCTION IS COMPLETE. CONTRACTOR TO COORDINATE WITH CITY FOR LOCATION OF PERMANENT SIGNS AND INSTALL 4" PVC SLEEVE INSERT IN SIDEWALKS AT ALL PROPOSED SIGN LOCATIONS. ALL OTHER SIGNS OWNED BY PROPERTY OWNERS WHICH ARE LOCATED IN RIGHT OF WAY OR EASEMENT AREAS ARE TO BE REMOVED BY THE CONTRACTOR AS REQUIRED, CAREFULLY STORED AND REINSTALLED WHEN CONSTRUCTION IS COMPLETE. IF INSTALLATION IN THE EXISTING LOCATION IS NOT POSSIBLE COORDINATE WITH CITY AND PROPERTY OWNER FOR LOCATION OF REINSTALLED SIGN.

EXISTING DUKE ENERGY POLES: EXISTING STREET LIGHTING POLES ARE OWNED BY DUKE ENERGY AND WILL BE REMOVED BY DUKE AT NO COST TO THE CONTRACTOR.

TEMPORARY BUSINESS ACCESS SIGNS: ANY BUSINESS WHICH HAS ITS DRIVEWAY OR OTHER NORMAL ACCESS DISTURBED OR IF THE EXISTING BUSINESS SIGN IS TEMPORARILY REMOVED SHALL HAVE TEMPORARY BUSINESS SIGNAGE INSTALLED TO ASSIST THE PUBLIC WITH LOCATING THE BUSINESS AND ACCESS TO IT. THE SIGN SHALL BE OF STANDARD MATERIALS, UNLIGHTED AND MOUNTED ON TYPICAL CONSTRUCTION SIGN STANDARDS. LETTERS FOR BUSINESS NAMES SHALL BE A MINIMUM OF 6" IN HEIGHT AND BE EASILY VISIBLE FROM PASSING VEHICLES AND PEDESTRIANS. THE MAXIMUM SIZE OF SIGN FOR A SINGLE BUSINESS SHALL BE 10 SQ FT IN AREA. ONLY THE BUSINESS NAME SHALL BE PERMITTED ON THE SIGN AND NO ADVERTISING WILL BE PERMITTED ON THE SIGN.

OWNER PROVIDED MATERIALS: THE OWNER WILL PROVIDE THE FOLLOWING ITEMS TO THE CONTRACTOR. THE CONTRACTOR SHALL MOUNT AND INSTALL THEM IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS:
- BENCHES-VICTOR STANLEY MODEL CR-196 WITH FORMED VERTICAL STEEL SCROLLS
- STREET LIGHT IUMINAIRES-STERNBERG LIGHTING MODEL A850SRLED-4ARC45T3 66 WATT LIGHT WITH FITTER 5P
- STREET LIGHT POLES-STERNBERG ORNAMENTAL POLE 5200 BARRINGTON SERIES 5214TFP6 WITH BLACK FINISH 14 FT HIGH
- TREE GRATES-URBAN ACCESSORIES CHINOOK 5' X 5' WITH -S FRAME AND BLACK POWDER COAT
- BICYCLE LOOPS-WABASH VALLEY MODEL BL 100N (IN GROUND MOUNT)
- TRASH RECEPTACLES-BIG BELLY SOLAR COMPACTOR/RECYCLE UNIT

NEW TREES: TREES TO BE PLANTED FOR THE PROJECT SHALL BE MINIMUM OF 1.75" CALIPER MEASURED AT 54" ABOVE GRADE. TREE SPECIES TO USE INCLUDE:
- RED BARRON CRABAPPLE
- PRAIRIE FIRE CRABAPPLE
- PROFESSOR SPRINGER CRABAPPLE
- WINTERKING HAWTHORN (THORNLESS)
- SERVICEBERRY

USE OF INDOT STANDARD SPECIFICATIONS: MATERIALS AND WORKMANSHIP FOR THE FOLLOWING WORK SHALL BE AS REQUIRED IN THE 2010 INDOT STANDARD SPECIFICATIONS UNLESS SUPERCEDED BY SPECIAL CONDITIONS OR THESE DRAWINGS.
- BITUMINOUS PAVING SECTION 402
- CONCRETE PAVING SECTION 502
- CONCRETE CURBS SECTION 605
- CONCRETE SIDEWALKS SECTION 604
- CAST IN PLACE CONCRETE SECTION 702
- STEEL REINFORCEMENT SECTION 703
- PAVEMENT MARKINGS SECTION 808
- SEEDING AND SODDING SECTION 621
- PLANTING TREES AND SHRUBS SECTION 622
- EROSION CONTROLS SECTION 205
- TRAFFIC SIGNALS, WIRING AND EQUIPMENT SECTION 805

EXISTING UTILITY SERVICES: THE PROPOSED WORK CROSSES NUMEROUS EXISTING UTILITY LINES. ALL EXISTING UTILITY SERVICES SHALL REMAIN IN OPERATION DURING CONSTRUCTION UNLESS ALTERNATE SERVICE IS PROVIDED OR UNTIL NEW REPLACEMENT SERVICES ARE INSTALLED AND READY TO BE PLACED INTO OPERATION. WORK INCLUDED IN THIS PROJECT IS EXPECTED TO REQUIRE RELOCATION OF SOME WATER AND SEWER SERVICE LINES ON THE EAST SIDE OF WALNUT STREET.

WATER AND SANITARY SEWER SERVICES: ALL ACTIVE WATER AND SANITARY SEWER SERVICE LINES ENCOUNTERED ARE TO BE REPLACED AS PART OF THE PROJECT WHERE SHOWN ON THE PLANS OR WHERE ENCOUNTERED IF DIFFERENT THAN SHOWN. CONTRACTOR SHALL CONFORM TO THE UTILITY DEPARTMENT STANDARDS FOR NEW CONSTRUCTION WITH THE REPLACEMENT SERVICE LINES. CONTRACTOR SHALL INSTALL ALL REQUIRED SERVICE CONNECTIONS ON REPLACEMENT WATERMAINS AND SANITARY SEWERS AND INSTALL ALL SERVICE LINES TO THE BUILDING FACE OR RIGHT OF WAY LINE AS APPROPRIATE. REPLACEMENT SANITARY SERVICE LINES SHALL BE OF THE SAME SIZE AS THE EXISTING SERVICE WITH A MINIMUM OF 6" DIAMETER. REFER TO CBU STANDARD SPECIFICATIONS DETAIL 19 FOR MINIMUM CONSTRUCTION REQUIREMENTS. IN ADDITION THE TOP OF THE CLEANOUT SHALL BE NO MORE THAN 3" BELOW THE TOP OF CASTING AND THE LOCATING WIRE SHALL BE BROUGHT UP TO THE SURFACE INSIDE THE CLEANOUT CASTING. THE LOCATING WIRE SHALL BE #10 INSULATED SOLID COPPER WIRE WRAPPED AROUND THE LATERAL AT LEAST ONCE FOR EVERY PIPE JOINT BETWEEN THE MAIN AND THE CLEANOUT. ALL WATER SERVICE LINES SHALL BE OF THE SAME SIZE AS THE EXISTING SERVICE WITH A MINIMUM 2" SERVICE LINE, AND SHALL INCLUDE A METER SETTER AND METER BOX. WATER METERS WILL BE INSTALLED BY CITY.

STORM DRAINS: CONTRACTOR SHALL CONNECT ALL EXISTING DRAINAGE PIPES WHICH ARE FOUND TO THE NEW STORM SEWER SYSTEM WITH MATERIALS CONFORMING TO UTILITY DEPARTMENT STANDARDS AND COMPATIBLE WITH THE EXISTING DRAINS OR STORM SEWERS.

GAS, ELECTRIC, AND OTHER BURIED UTILITIES: CONTRACTOR SHALL COORDINATE WITH OTHER UTILITY COMPANIES TO MAINTAIN SERVICE AND RELOCATE SERVICES AS REQUIRED. SERVICE RELOCATIONS BY OTHER UTILITIES WITHIN CITY RIGHT OF WAY SHALL BE AT THE PRIVATE UTILITY COST.

USE OF RIGHT OF WAY: CONTRACTOR IS ALLOWED TO USE ALL RIGHT OF WAY AREAS SHOWN ON THE PLANS FOR HIS WORK, NO MATERIALS OR EQUIPMENT SHALL BE STORED OR WORK ACTIVITIES OCCUR IN A LOCATION OR MANNER WHICH PRESENTS A HAZARD TO THE PUBLIC OR ENVIRONMENT EVEN IF CONTAINED WITHIN THE ALLOWABLE WORK AREAS. THE SAFEGUARD OF MATERIALS AND EQUIPMENT REMAINING IN ALLOWABLE WORK AREAS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IF ADDITIONAL AREAS ARE REQUIRED BY THE CONTRACTOR BEYOND THOSE INDICATED THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, NEGOTIATING AND PAYING FOR SUCH AREAS AT NO ADDITIONAL COST TO THE CITY. CONTRACTOR SHALL STAKE ALL EASEMENTS AND ADDITIONAL WORK AREAS OBTAINED PRIOR TO COMMENCING WORK TO IDENTIFY THE LIMITS OF WORK.

COORDINATION OF DRAWINGS, SPECIAL CONDITIONS, CONSTRUCTION SPECIFICATIONS AND STANDARD SPECIFICATIONS: THE CONTRACT DOCUMENTS ARE INTENDED TO BE COMPLEMENTARY AND TO DESCRIBE AND PROVIDE FOR A COMPLETE WORK. A REQUIREMENT IN ONE IS BINDING AS THOUGH OCCURRING IN ALL. THE CONTRACT DOCUMENTS INCLUDED FOR THIS WORK AND THE ORDER OF PRECEDENCE ARE AS FOLLOWS:
1. PROJECT AGREEMENT
2. DOCUMENTS APPEARING IN THE PROJECT MANUAL INCLUDING SPECIAL CONDITIONS
3. PROJECT DRAWINGS
4. CONSTRUCTION SPECIFICATIONS FOR CITY OF BLOOMINGTON UTILITIES DATED JANUARY 1, 2011. (COPIES OF CURRENT CBU SPECIFICATIONS ARE AVAILABLE ON THE WEB AT WWW.BLOOMINGTON.IN.GOV/UTILITIES UNDER THE CATEGORY "FOR CONTRACTORS".
5. INDOT STANDARD SPECIFICATIONS FOR 2010
6. INDOT STANDARD DRAWINGS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	KHC
Drawn By	HFF
Checked By	KHC
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Filename	001GA1.DWG
Project No.	11721
Project Date	12/2/11

PAUL N. ELLING
REGISTERED
NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

GENERAL LEGEND

DONOHUE & ASSOCIATES

Sheet No. 2

Drawing No. **G-1**

ABBREVIATIONS

AGG – AGGREGATE
B/C – BACK OF CURB
BIT – BITUMINOUS/ASPHALT
CIP – CAST IRON PIPE
CO – CLEANOUT
CONC – CONCRETE
CMP – CORRUGATED METAL PIPE
CSP – CONCRETE SEWER PIPE
DIA – DIAMETER
DIP – DUCTILE IRON PIPE
EXTG – EXISTING
EOP – EDGE OF PAVEMENT
F&C – FRAME AND COVER
F/C – FACE OF CURB
F–F – FACE TO FACE
F/G – FINISHED GRADE
FES – FLARED END SECTION
INV – INVERT
L – LENGTH OF CURVE
LF – LINEAR FT
LT – LEFT
NG – NATURAL GAS
OH – OVERHEAD UTILITY
PC – POINT OF CURVATURE
PE – POLYETHYLENE PIPE
PI – POINT OF INTERSECTION
PL – PROPERTY LINE
PT – POINT OF TANGENCY
PVC – POLYVINYL CHLORIDE PIPE
PVI – POINT OF VERTICAL INTERSECTION
R – RADIUS
RCP – REINFORCED CONCRETE PIPE
RIM – TOP OF CASTING ELEVATION
ROW – RIGHT OF WAY
RT – RIGHT
SAN – SANITARY SEWER
STM – STORM SEWER
SD – SUMP DISCHARGE
T/C – TOP OF CURB
T/W – TOP OF WALL
UD – UNDERDRAIN
VC – VERTICAL CURVE

LEGEND

EXISTING	PROPOSED	
		BENCHMARK
		CATCH BASIN
		CULVERT
		CULVERT OVER 24" (SHOWN ACTUAL SIZE)
		GAS VALVE
		GUY WIRE
		HAY BALES
		HEADWALL
		HYDRANT
		INLET
I.P.		IRON PIPE
		MANHOLE
		MARSH
M	M	METER
		UTILITY POLE
		UTILITY POLE WITH LIGHT
		SECTION CORNER
		SIGN
	x 400.00 x 400.00	SPOT ELEVATION
		SOIL BORING
		STREET LIGHT
		SURVEY CONTROL POINT
		TELEPHONE PEDESTAL
		TREE CONIFEROUS, DECIDIOUS
		TREE REMOVAL
		TREE/SHRUB LINE
		WATER VALVE

LINE TYPE IDENTIFICATION

EXISTING	PROPOSED	
CATV		CABLE TV
		CENTERLINE OF ROAD
100	100	CONTOUR
		DITCH/SWALE
		EASEMENT
X X	X X	FENCE
E	E	ELECTRIC
FO	FO	FIBER OPTIC
FM	FM	FORCEMAIN
G	G	GAS
		GUARDRAIL
OH		OVERHEAD ELECTRIC
		PIPE, ABANDON
O O		PIPE, PREVIOUSLY ABANDONED
	X X X X X X	PIPE, REMOVE
		PIPE OVER 24" (SHOWN ACTUAL SIZE)
		PROPERTY LINE
		R.O.W.
		RAILROAD
SAN	SAN	SANITARY SEWER
		SILT FENCE
STM	STM	STORM SEWER
T		TELEPHONE
W	W	WATER
		WATERS EDGE
WET		WETLAND

NOTE:

THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS NEEDED IN THESE CONTRACT DRAWINGS.

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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

CIVIL LEGEND

DONOHUE & ASSOCIATES

Sheet No. 3

Drawing No. **G-2**

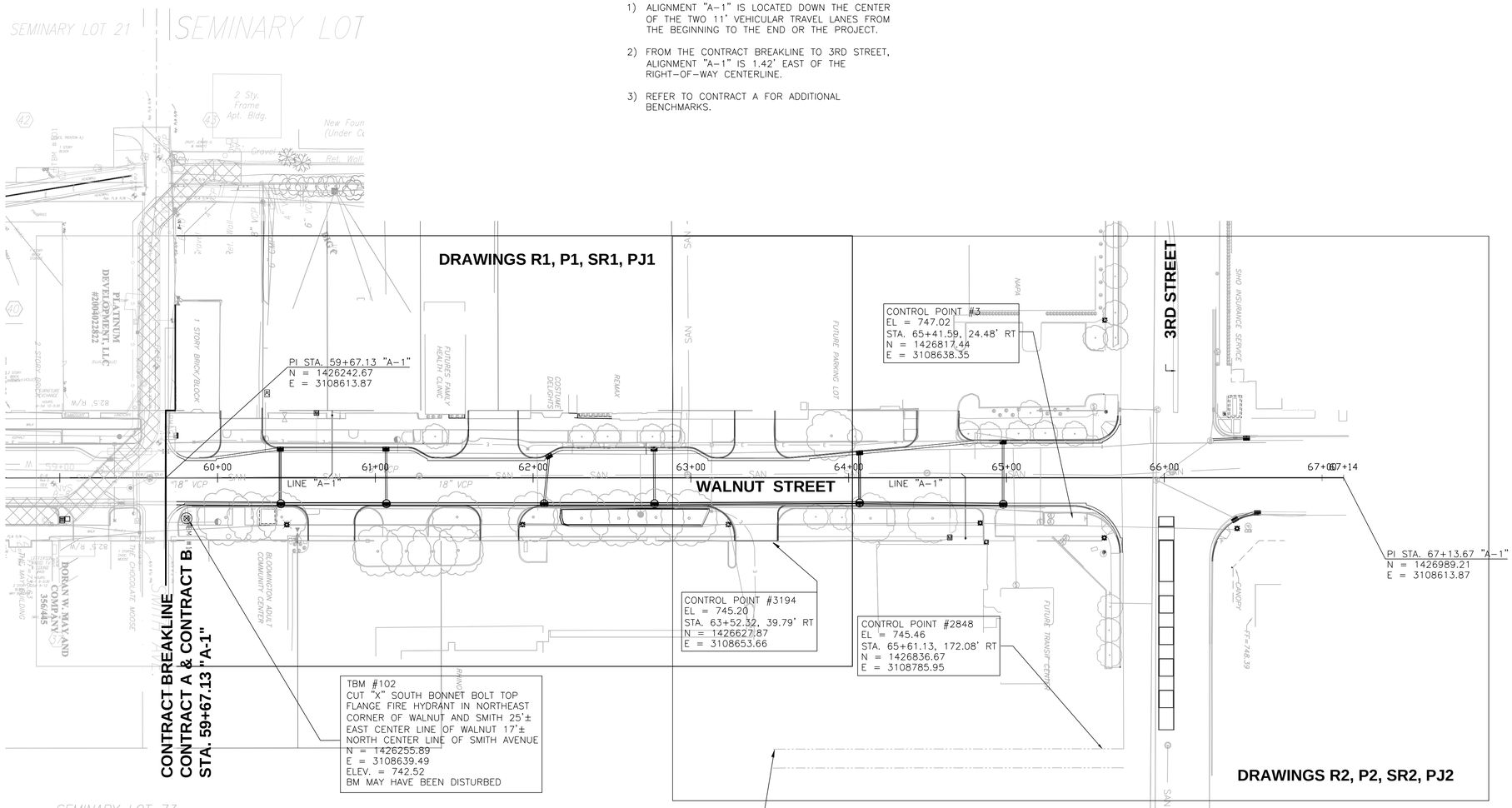
GENERAL NOTES:

1) ALIGNMENT "A–1" IS LOCATED DOWN THE CENTER OF THE TWO 11' VEHICULAR TRAVEL LANES FROM THE BEGINNING TO THE END OR THE PROJECT.

2) FROM THE CONTRACT BREAKLINE TO 3RD STREET, ALIGNMENT "A–1" IS 1.42' EAST OF THE RIGHT–OF–WAY CENTERLINE.

3) REFER TO CONTRACT A FOR ADDITIONAL BENCHMARKS.

0 40'



Revision Number	Revision Description	Drawn By	Checked By	Date

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PAUL N. ELLING
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NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

SITE LAYOUT AND GEOMETRICS

DONOHUE & ASSOCIATES

Sheet No. 4

Drawing No. **L1**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED

CONCRETE REMOVALS

- C1 CONCRETE CURB OR CURB AND GUTTER
- C2 CONCRETE/LIMESTONE PLANTER EDGING
- C3 CONCRETE ADA RAMP
- C4 CONCRETE 4" SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT

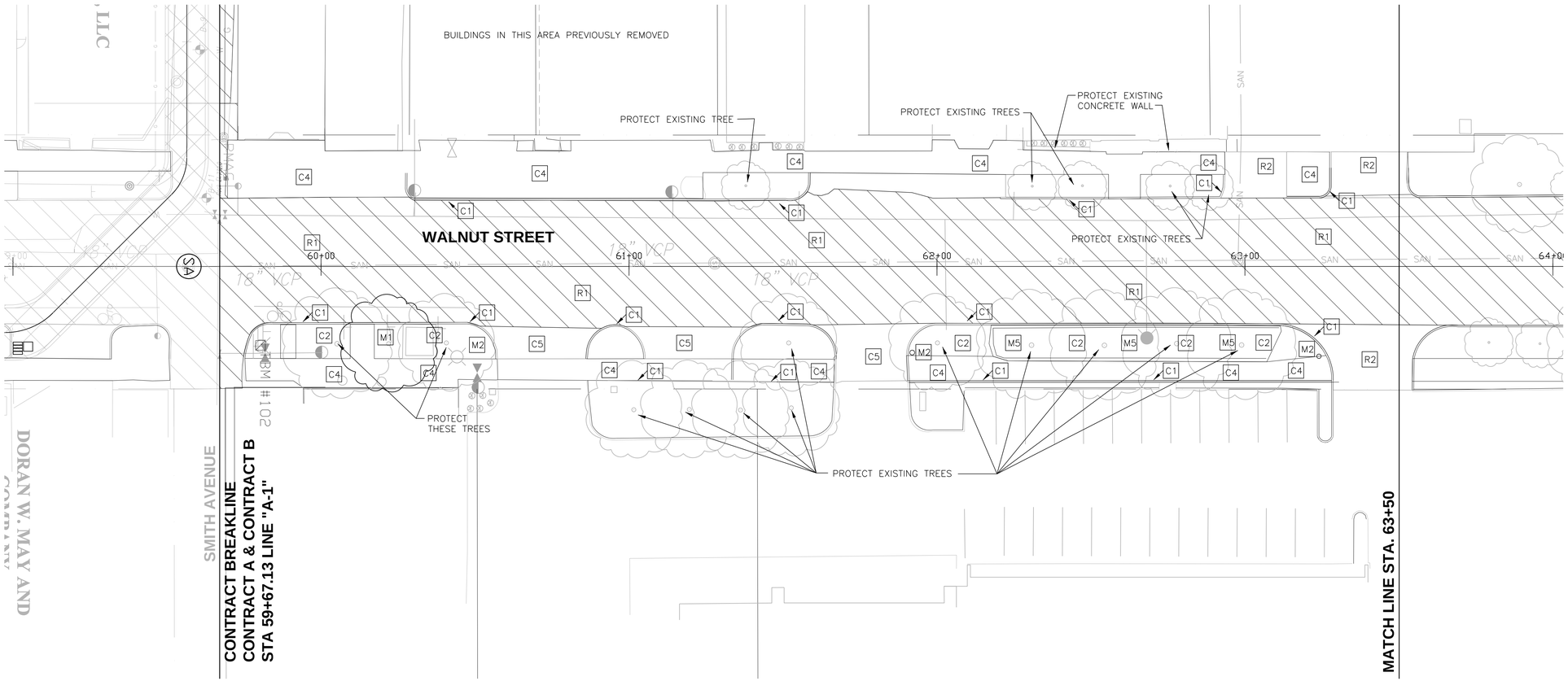
MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK
- M5 LIMESTONE PLANTER

PAVEMENT REMOVALS

- R1 BITUMINOUS FULL DEPTH PAVEMENT
- R2 BITUMINOUS DRIVEWAY/PARKING LOT
- R3 PAVEMENT MARKING

0 10'



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Project No.	11721
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CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 5

Drawing No. **R1**

GENERAL NOTES:

1. CONTRACTOR SHALL REMOVE BITUMINOUS, CONCRETE, BRICK, STONE, EARTH TIMBERS, TRACKS, AND OTHER MATERIALS WHICH MAY EXIST IN OR BENEATH PAVEMENTS, CURBS, DRIVES AND WALKWAYS TO THE EXTENT NECESSARY TO ALLOW THE FULL DEPTH CONSTRUCTION OF THE PROPOSED BASE AND SUBBASE LAYERS AT NO ADDITIONAL COST TO THE OWNER. THE EXISTING PAVEMENT DEPTHS (WHERE INDICATED) ARE AVERAGE VALUES BASED ON SOIL BORING AND PAVEMENT CORE INFORMATION AVAILABLE TO THE ENGINEER. ACTUAL DEPTHS AND MATERIALS MAY VARY FROM THE AVERAGE VALUES. THE CONTRACTOR IS NOT ENTITLED TO RELY SOLELY ON THE INDICATED DEPTHS AND MATERIALS AND SHALL MAKE HIS OWN DETERMINATION REGARDING THE ACTUAL REMOVAL QUANTITIES AND MATERIALS TO BE REMOVED.
2. REMOVE ALL UTILITY CASTINGS FOR UTILITY LINES WHICH ARE TO BE ABANDONED

CONCRETE REMOVALS

- C1 CONCRETE CURB OR CURB AND GUTTER
- C2 CONCRETE/LIMESTONE PLANTER EDGING
- C3 CONCRETE ADA RAMP
- C4 CONCRETE 4" SIDEWALK
- C5 CONCRETE DRIVEWAY/PARKING LOT

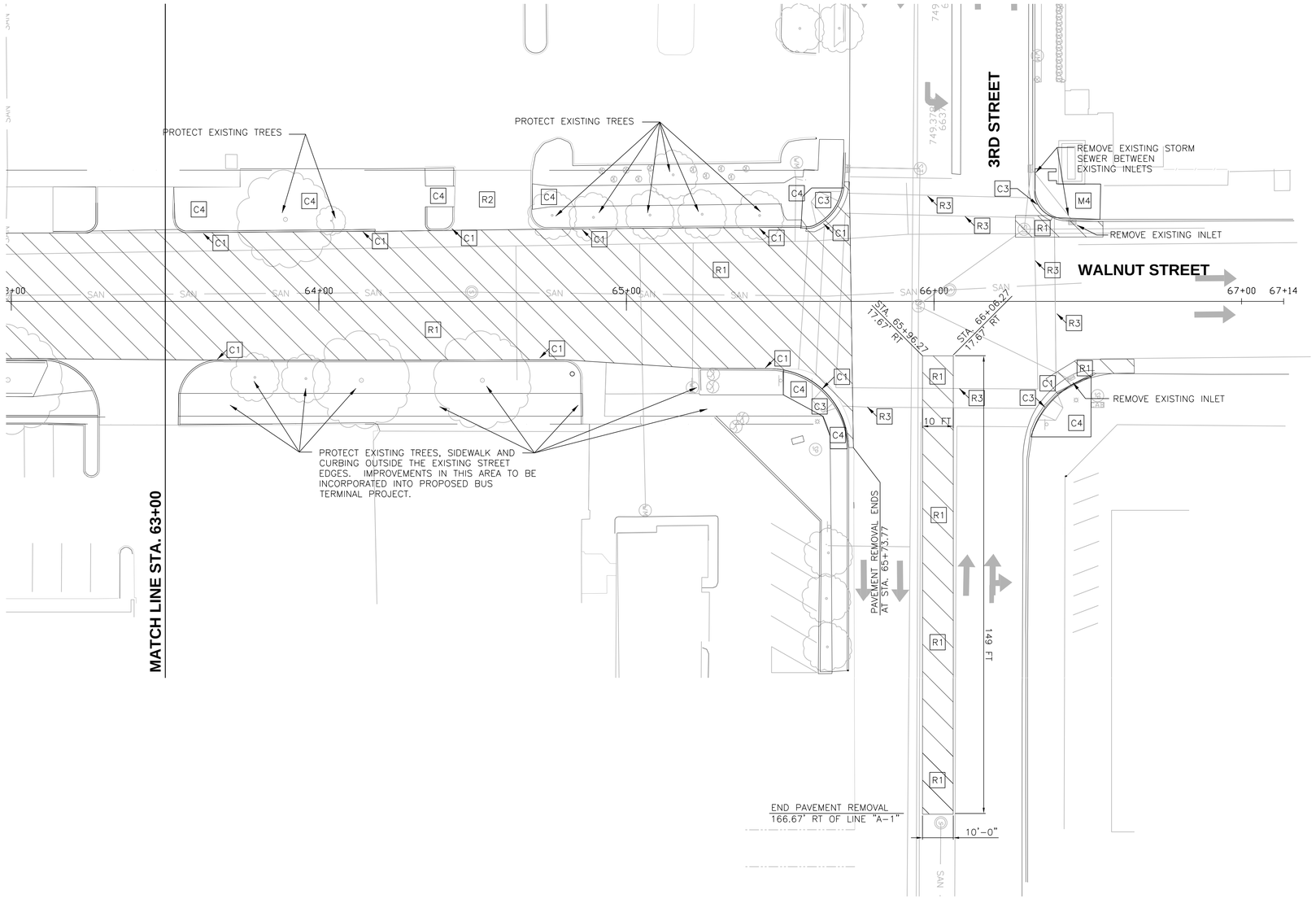
MISCELLANEOUS REMOVALS

- M1 EXISTING TREE
- M2 EXISTING POLE
- M3 REMOVE/REPLACE EXISTING SIGN
- M4 BRICK PAVED SIDEWALK

PAVEMENT REMOVALS

- R1 BITUMINOUS FULL DEPTH PAVEMENT
- R2 BITUMINOUS DRIVEWAY/PARKING LOT
- R3 PAVEMENT MARKING

0 10'



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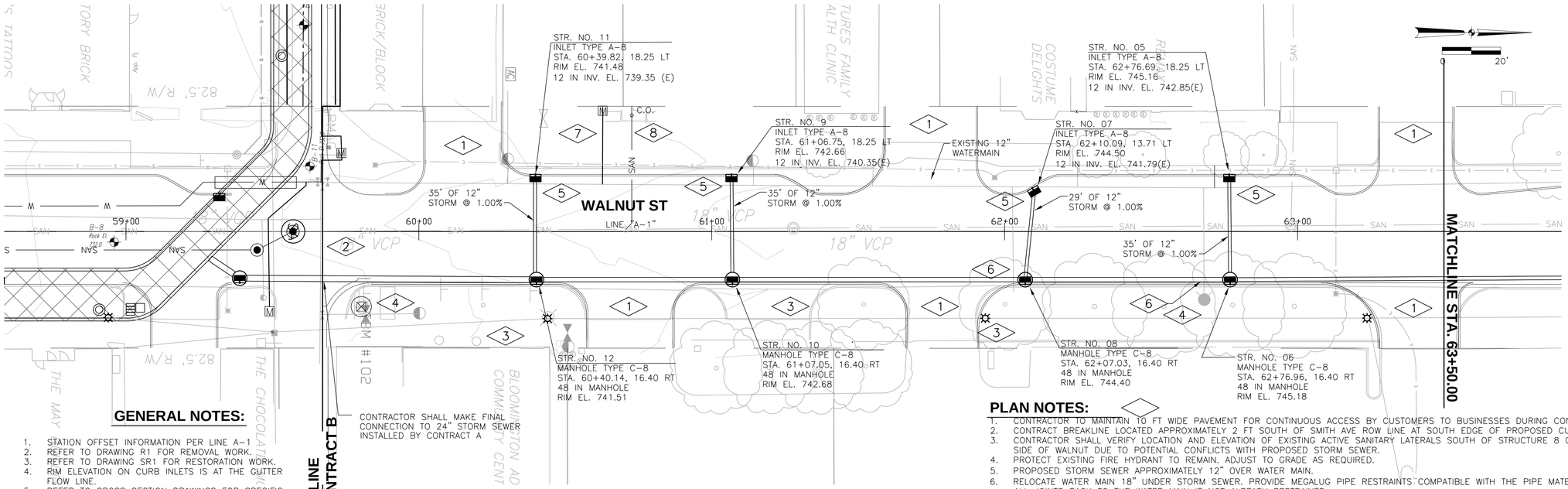
CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

PLAN VIEW REMOVALS

DONOHUE & ASSOCIATES

Sheet No. 6

Drawing No. **R2**



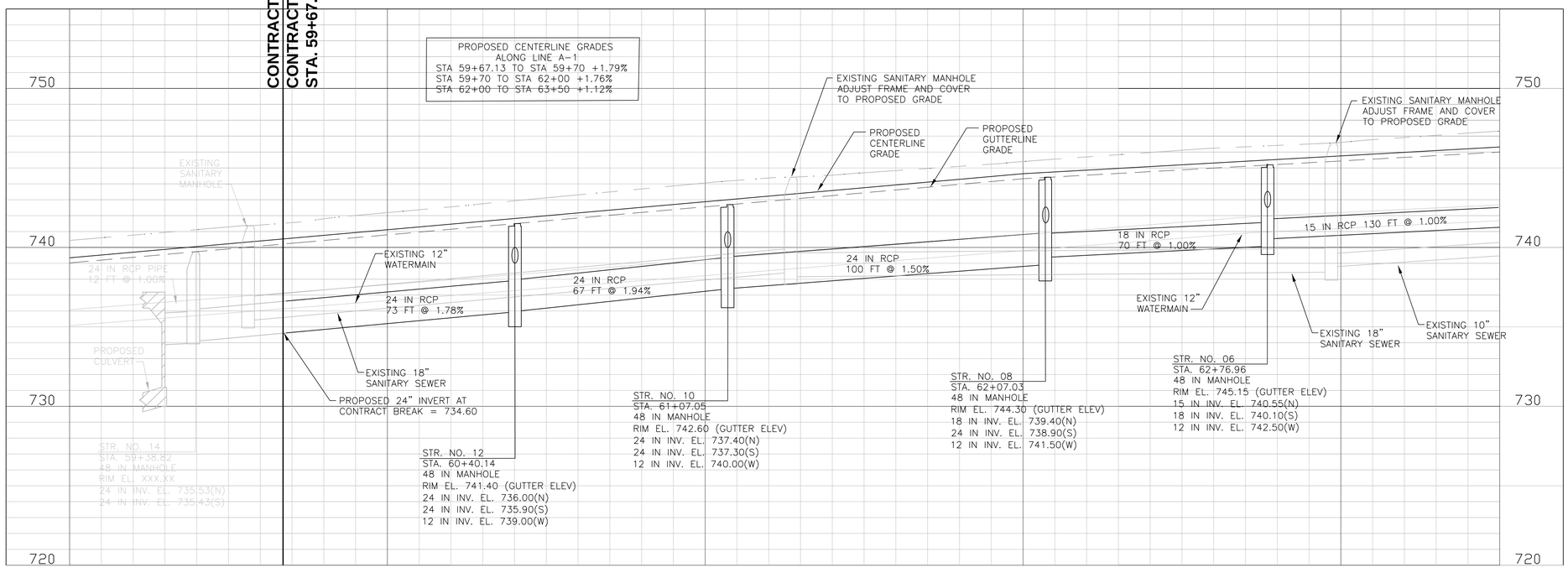
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A-1
2. REFER TO DRAWING R1 FOR REMOVAL WORK.
3. REFER TO DRAWING SR1 FOR RESTORATION WORK.
4. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.

PLAN NOTES:

1. CONTRACTOR TO MAINTAIN 10 FT WIDE PAVEMENT FOR CONTINUOUS ACCESS BY CUSTOMERS TO BUSINESSES DURING CONSTRUCTION.
2. CONTRACT BREAKLINE LOCATED APPROXIMATELY 2 FT SOUTH OF SMITH AVE ROW LINE AT SOUTH EDGE OF PROPOSED CURBING.
3. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING ACTIVE SANITARY LATERALS SOUTH OF STRUCTURE 8 ON EAST SIDE OF WALNUT DUE TO POTENTIAL CONFLICTS WITH PROPOSED STORM SEWER.
4. PROTECT EXISTING FIRE HYDRANT TO REMAIN. ADJUST TO GRADE AS REQUIRED.
5. PROPOSED STORM SEWER APPROXIMATELY 12" OVER WATER MAIN.
6. RELOCATE WATER MAIN 18" UNDER STORM SEWER. PROVIDE MEGALUG PIPE RESTRAINTS COMPATIBLE WITH THE PIPE MATERIAL AT ALL JOINTS BACK TO THE WATER MAIN IF NOT ALREADY RESTRAINED.
7. INSTALL NEW CORPORATION STOP, 2" WATER SERVICE LINE, NEW CURB STOP AND METER ASSEMBLY. CURB STOP AND METER ASSEMBLY TO BE AS CLOSE TO RIGHT OF WAY LINE AS PRACTICAL.
8. INSTALL 10"X6" WYE AND 6" DIAMETER SANITARY LATERAL TO PROPERTY LINE IN ACCORDANCE WITH CBU SPECIFICATIONS. INSTALL CLEANOUT FOR SERVICE IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS.

STA 59+00 to STA 63+50



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Date | Checked By | Drawn By | Revision Description | Revision Number

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

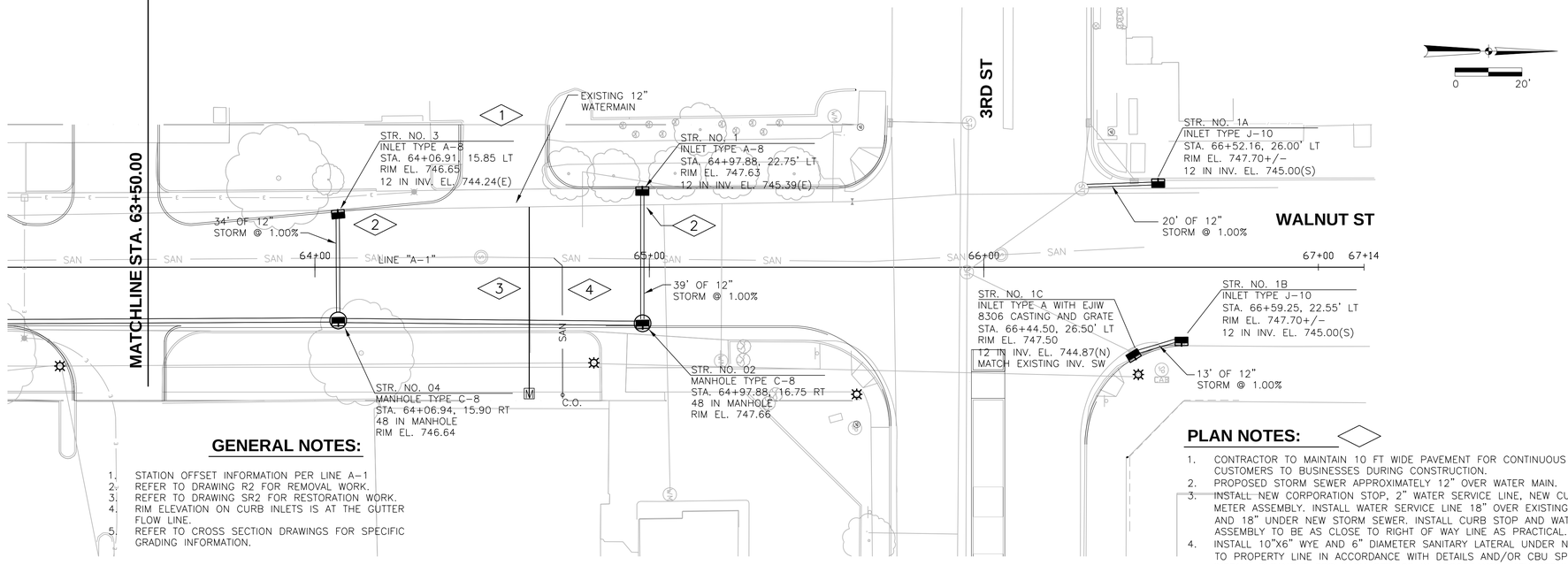
CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS

DONOHUE & ASSOCIATES

Sheet No. 7

Drawing No. **P1**



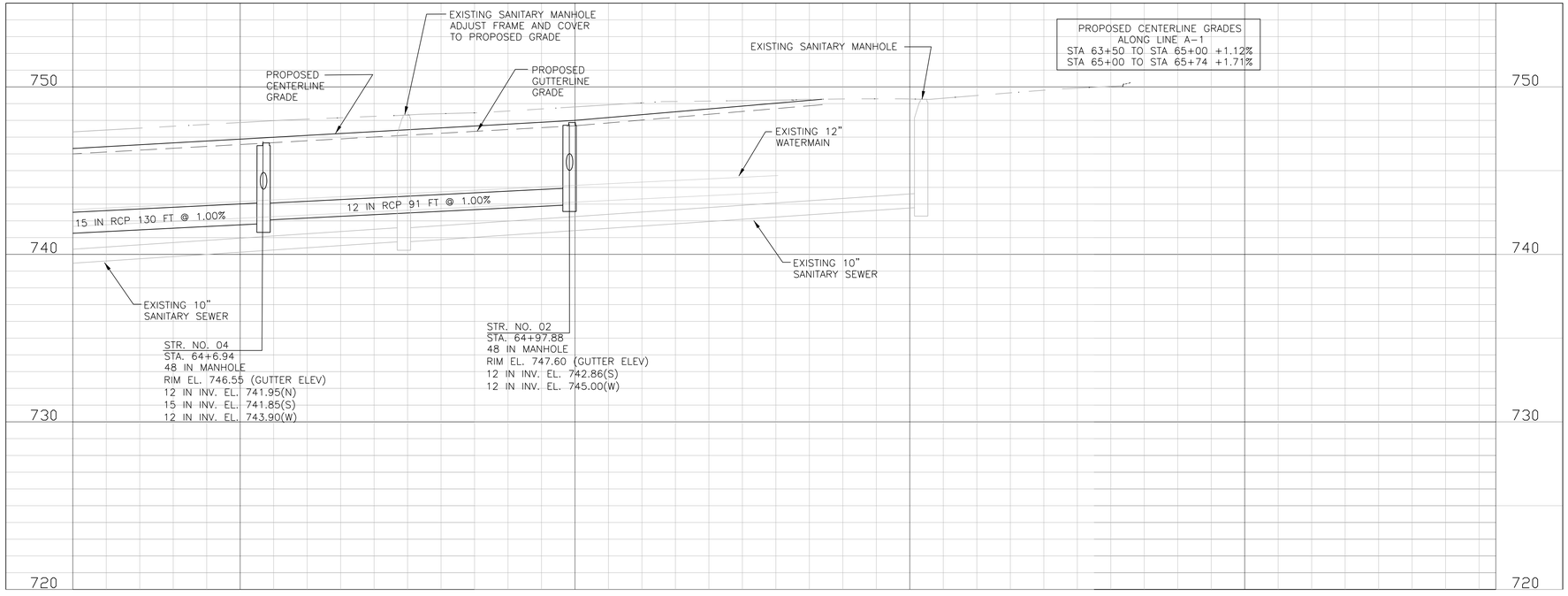
GENERAL NOTES:

1. STATION OFFSET INFORMATION PER LINE A-1
2. REFER TO DRAWING R2 FOR REMOVAL WORK.
3. REFER TO DRAWING SR2 FOR RESTORATION WORK.
4. RIM ELEVATION ON CURB INLETS IS AT THE GUTTER FLOW LINE.
5. REFER TO CROSS SECTION DRAWINGS FOR SPECIFIC GRADING INFORMATION.

PLAN NOTES:

1. CONTRACTOR TO MAINTAIN 10 FT WIDE PAVEMENT FOR CONTINUOUS ACCESS BY CUSTOMERS TO BUSINESSES DURING CONSTRUCTION.
2. PROPOSED STORM SEWER APPROXIMATELY 12" OVER WATER MAIN.
3. INSTALL NEW CORPORATION STOP, 2" WATER SERVICE LINE, NEW CURB STOP AND METER ASSEMBLY. INSTALL WATER SERVICE LINE 18" OVER EXISTING SANITARY SEWER AND 18" UNDER NEW STORM SEWER. INSTALL CURB STOP AND WATER METER ASSEMBLY TO BE AS CLOSE TO RIGHT OF WAY LINE AS PRACTICAL.
4. INSTALL 10"X6" WYE AND 6" DIAMETER SANITARY LATERAL UNDER NEW STORM SEWER TO PROPERTY LINE IN ACCORDANCE WITH DETAILS AND/OR CBU SPECIFICATIONS. INSTALL CLEANOUT FOR EACH SERVICE IN ACCORDANCE WITH DETAIL #19 OF CBU SPECIFICATIONS.

STA 63+50 to STA 67+75



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CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

PLAN AND PROFILE
PROPOSED STORM SEWERS

DONOHUE & ASSOCIATES

Sheet No. 8

Drawing No. **P2**

0 20'

PROPOSED CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP

PROPOSED BITUMINOUS

- (R1) 10" CONCRETE OVER 6" #53 STONE PAVEMENT
- (R2) 1.5" BITUMINOUS SURFACE OVER 8.5" CONCRETE OVER 6" #53 STONE PAVEMENT

MISCELLANEOUS

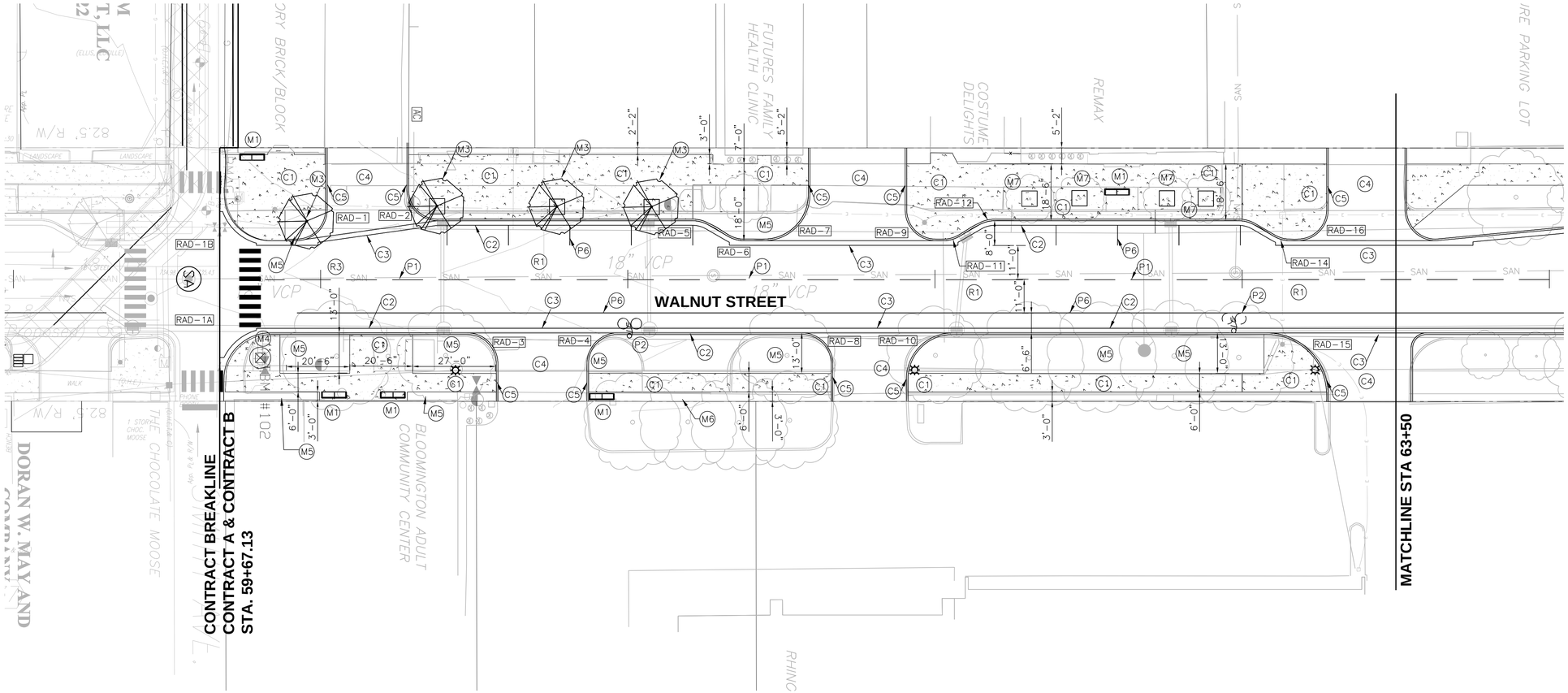
- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH
- (M7) TREE GRATE ONLY

PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" SINGLE WHITE THERMOPLASTIC LINE
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1"
5. ADJUST SIDEWALK GRADES AT ALL DRIVEWAY LOCATIONS TO SLOPE TO DRIVEWAY ELEVATION. SIDEWALK RAMPS MAY BE REQUIRED BUT ARE NOT SHOWN ON THE PLANS. A SLOPE NO MORE THAN OF 12:1 IS TO BE USED.
6. TREE SPECIES TO BE PLANTED IN EACH LOCATION SHALL BE AS SELECTED BY OWNER FROM LIST INCLUDED ON DRAWING G-1.
7. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.



CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-1	10.0	59+92.13, 12.50 LT	60+02.13, 22.50 LT
RAD-1A	15.0	59+68.22, 32.50 RT	59+83.22, 17.50 RT
RAD-1B	15.0	59+68.22, 27.50 LT	59+83.22, 12.50 LT
RAD-2	10.0	60+28.13, 29.00 LT	60+38.13, 19.00 LT
RAD-3	10.0	60+47.71, 17.50 RT	60+57.71, 27.50 RT
RAD-4	10.0	60+86.71, 27.50 RT	60+96.71, 17.50 RT
RAD-5	10.0	61+21.15, 19.00 LT	61+26.15, 17.66 LT
RAD-6	10.0	61+32.77, 13.84 LT	61+37.77, 12.50 LT
RAD-7	15.0	61+44.29, 12.50 LT	61+59.29, 27.50 LT
RAD-8	10.0	61+56.71, 17.50 RT	61+66.71, 27.50 RT

CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-9	10.0	61+90.29, 22.50 LT	62+00.29, 12.50 LT
RAD-10	15.0	61+90.71, 32.50 RT	62+05.71, 17.50 RT
RAD-11	10.0	62+02.80, 12.50 LT	62+07.80, 13.84 LT
RAD-12	10.0	62+14.41, 17.66 LT	62+19.41, 19.00 LT
RAD-13	10.0	62+98.90, 19.00 LT	63+03.90, 17.66 LT
RAD-14	10.0	63+10.51, 13.84 LT	63+15.51, 12.50 LT
RAD-15	20.0	63+07.97, 17.50 RT	63+27.97, 37.50 RT
RAD-16	10.0	63+18.01, 12.50 LT	63+28.01, 22.50 LT

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Approved By	PNE
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Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 9

Drawing No. **SR1**

PROPOSED CONCRETE

- (C1) CONCRETE SIDEWALK, 4" PER MISCELLANEOUS DETAILS (ADJUST GRADE AT DRIVEWAYS TO MATCH DRIVEWAY GRADES)
- (C2) CONCRETE COMBINED CURB AND GUTTER, 2' WIDTH
- (C3) CONCRETE COMBINED DEPRESSED CURB AND GUTTER, 2' WIDTH
- (C4) PCCP FOR APPROACHES
- (C5) CONCRETE BARRIER CURB, 6" WIDTH (DEPRESS AT SIDEWALK LOCATIONS
- (C6) CONCRETE ADA RAMP
- (C7) 6" STANDING CONCRETE CURB TIED TO EXISTING PAVEMENT REFER TO DRAWING M3 FOR DETAILS

PROPOSED BITUMINOUS

- (R1) 10" CONCRETE OVER 6" #53 STONE PAVEMENT
- (R2) 1.5" BITUMINOUS SURFACE OVER 8.5" CONCRETE OVER 6" #53 STONE PAVEMENT

MISCELLANEOUS

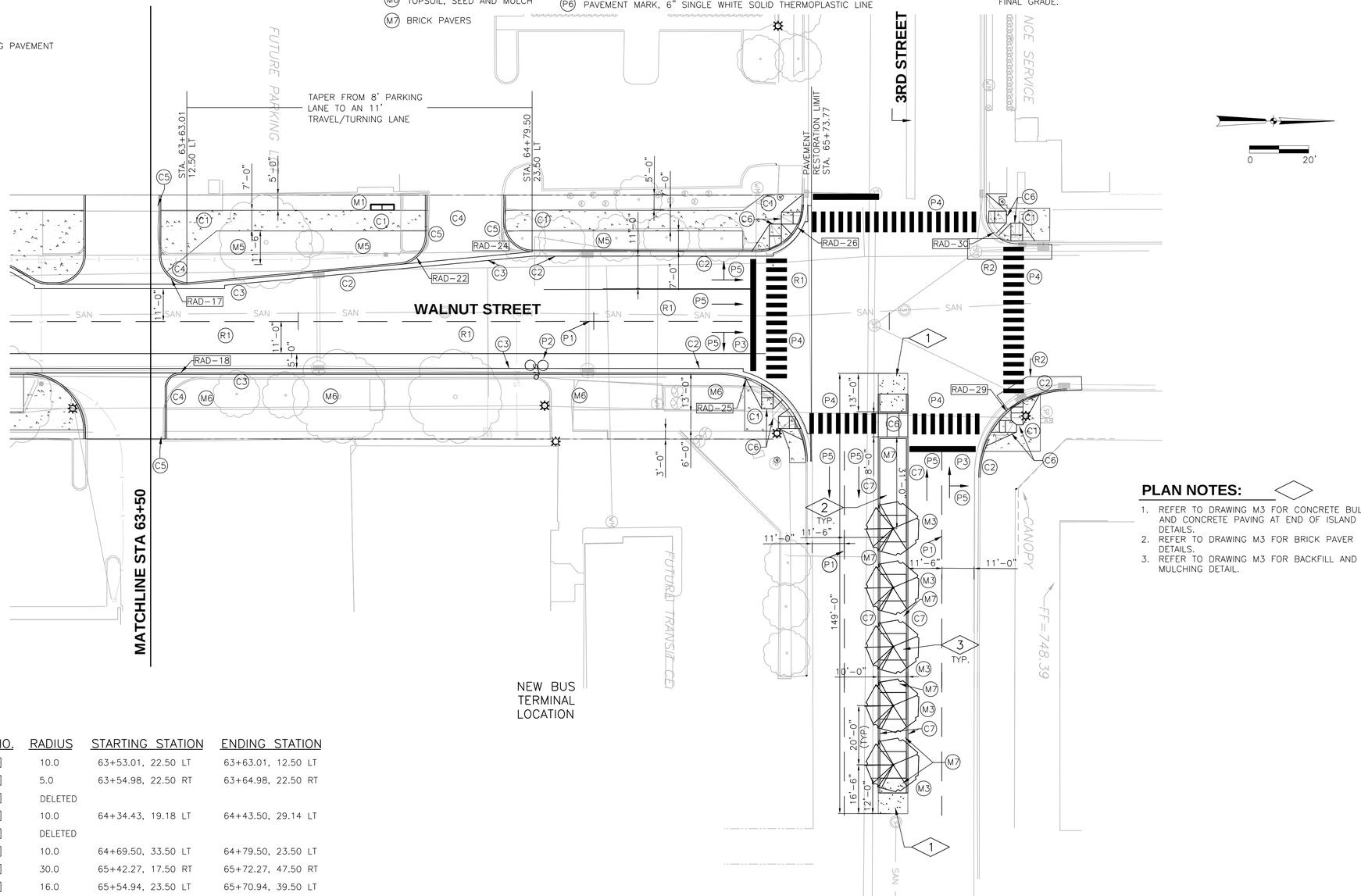
- (M1) BENCH
- (M2) TRASH RECEPTACLE
- (M3) PROPOSED TREE
- (M4) BIKE LOOPS
- (M5) SODDING
- (M6) TOPSOIL, SEED AND MULCH
- (M7) BRICK PAVERS

PROPOSED PAVEMENT MARKINGS

- (P1) PAVEMENT MARK, 4" SINGLE WHITE SKIP DASH THERMOPLASTIC LINE
- (P2) PAVEMENT MARK, BICYCLE SYMBOL (WHITE)
- (P3) PAVEMENT MARK, 24" SINGLE WHITE THERMOPLASTIC LINE
- (P4) PAVEMENT MARK, 18" SINGLE WHITE THERMOPLASTIC LINE
- (P5) PAVEMENT MARK, THERMOPLASTIC LANE INDICATION ARROW
- (P6) PAVEMENT MARK, 6" SINGLE WHITE SOLID THERMOPLASTIC LINE

GENERAL NOTES:

1. ALL DIMENSIONS REFERENCING CURBLINE ARE TO THE FACE OF CURB EXCEPT FOR DRIVING LANE DIMENSIONS WHICH ARE TO THE EDGE OF THE GUTTER.
2. ALL PLANTER DIMENSIONS ARE TO THE OUTSIDE FACE OF THE PLANTER.
3. ALL DIMENSIONS ARE BASED ON THE ROW WIDTH. SOME BUILDINGS MAY NOT BE AT THE ROW LINE. ADJUST FEATURE DIMENSIONS TO MATCH BUILDING FACES.
4. ALL RADIUS POINTS REFER TO LINE "A-1"
5. ADJUST SIDEWALK GRADES AT ALL DRIVEWAY LOCATIONS TO SLOPE TO DRIVEWAY ELEVATION. SIDEWALK RAMPS MAY BE REQUIRED BUT ARE NOT SHOWN ON THE PLANS. A SLOPE NO MORE THAN OF 12:1 IS TO BE USED.
6. TREE SPECIES TO BE PLANTED IN EACH LOCATION SHALL BE AS SELECTED BY OWNER FROM LIST INCLUDED ON DRAWING G-1.
7. ADJUST ALL EXISTING UTILITY CASTINGS WHICH ARE TO REMAIN IN SERVICE TO FINAL GRADE.



PLAN NOTES:

1. REFER TO DRAWING M3 FOR CONCRETE BULLNOSE AND CONCRETE PAVING AT END OF ISLAND DETAILS.
2. REFER TO DRAWING M3 FOR BRICK PAVER DETAILS.
3. REFER TO DRAWING M3 FOR BACKFILL AND TREE MULCHING DETAIL.

CURB NO.	RADIUS	STARTING STATION	ENDING STATION
RAD-17	10.0	63+53.01, 22.50 LT	63+63.01, 12.50 LT
RAD-18	5.0	63+54.98, 22.50 RT	63+64.98, 22.50 RT
RAD-21	DELETED		
RAD-22	10.0	64+34.43, 19.18 LT	64+43.50, 29.14 LT
RAD-23	DELETED		
RAD-24	10.0	64+69.50, 33.50 LT	64+79.50, 23.50 LT
RAD-25	30.0	65+42.27, 17.50 RT	65+72.27, 47.50 RT
RAD-26	16.0	65+54.94, 23.50 LT	65+70.94, 39.50 LT
RAD-27	DELETED		
RAD-28	DELETED		
RAD-29	30.0	66+30.25, 52.96' RT	66+60.25, 22.96' RT
RAD-30	10.0	66+32.79, 37.12' LT	66+42.79, 27.12' LT

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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER

CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

Sheet No. 10

Drawing No. **SR2**

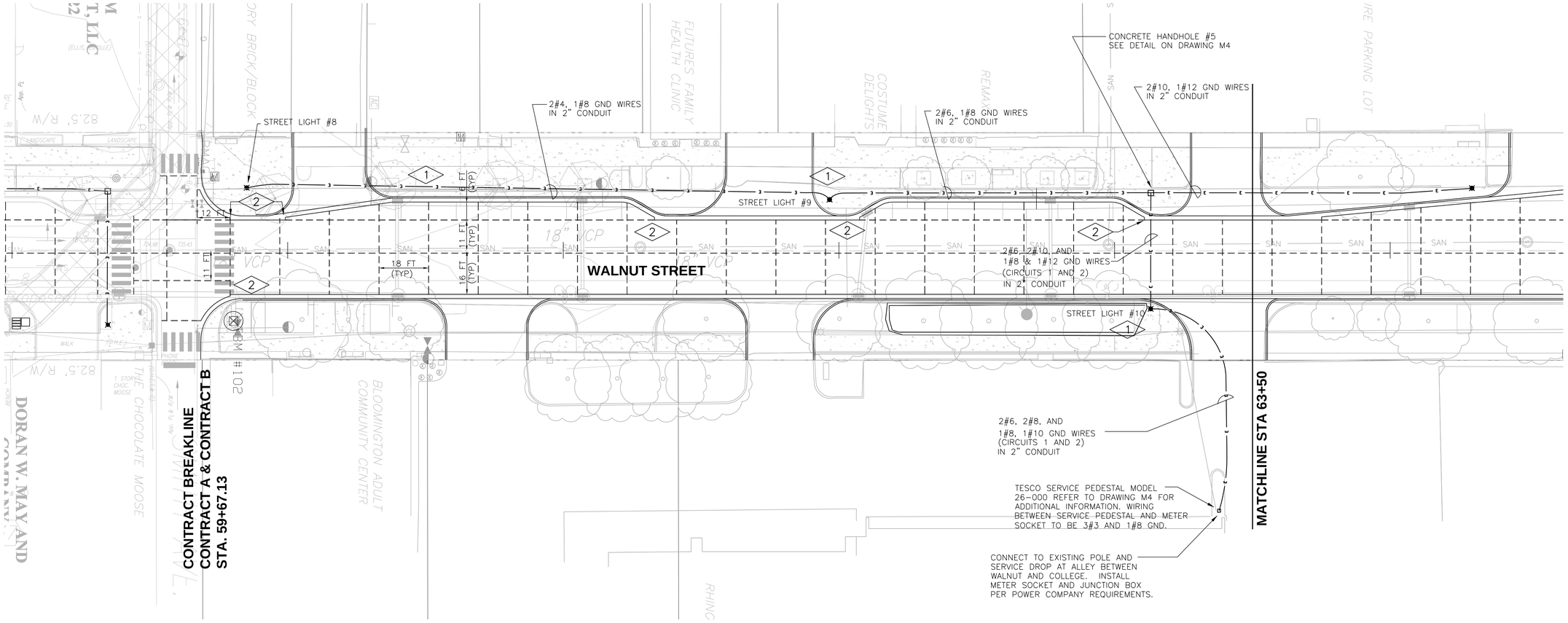
PLAN NOTES:

1. STREET LIGHT TO BE MOUNTED ON STANDARD POLE BASE USING STANDARD BASE BOLT PATTERN.
2. WIDEN CURB GUTTER SECTION APPROXIMATELY 1 FOOT TO MATCH PAVEMENT JOINT PATTERN

GENERAL NOTES:

1. LONGITUDINAL JOINT FOR WALNUT STREET TO BE ON WALNUT CENTERLINE.
2. ALL TRANSVERSE JOINTS ARE AT 18 FT INTERVALS UNLESS NOTED OTHERWISE.
3. SECONDARY LONGITUDINAL JOINTS LOCATED AS SHOWN.
4. CONTRACTOR SHALL ADJUST JOINT SPACING AS NEEDED TO CONFORM TO FIELD CONDITIONS. MAX TRANSVERSE SPACING IS 18 FT. MAX LONGITUDINAL JOINT SPACING IS 16 FT.

0 20'



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CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

STREET LIGHTING AND CONCRETE PAVEMENT JOINTING PLAN

DONOHUE & ASSOCIATES

Sheet No. 11

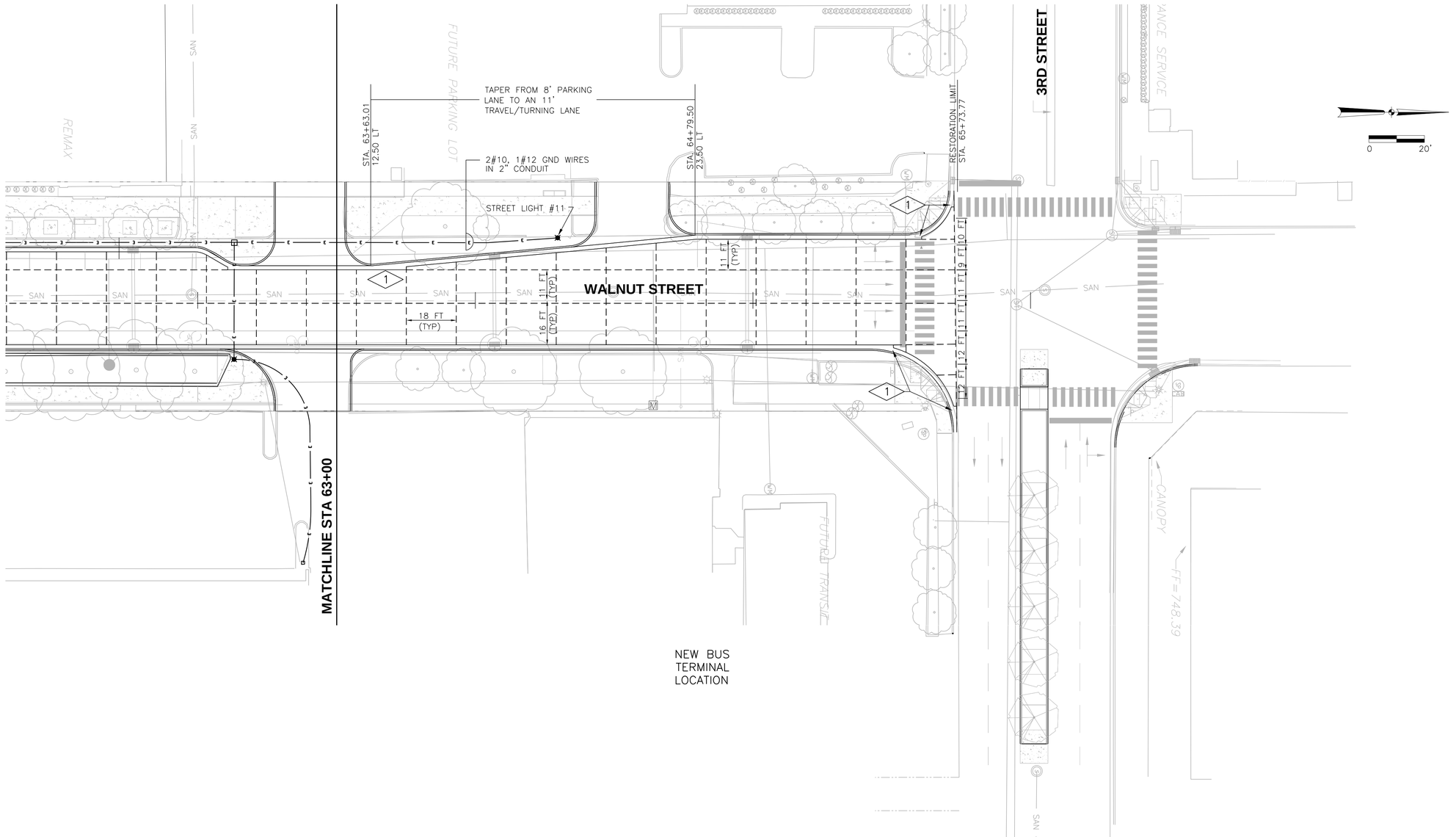
Drawing No. **PJ1**

PLAN NOTES:

1. WIDEN CURB GUTTER SECTION APPROXIMATELY 1 FOOT TO MATCH PAVEMENT JOINT PATTERN

GENERAL NOTES:

1. LONGITUDINAL JOINT FOR WALNUT STREET TO BE ON WALNUT CENTERLINE.
2. ALL TRANSVERSE JOINTS ARE AT 18 FT INTERVALS UNLESS NOTED OTHERWISE.
3. SECONDARY LONGITUDINAL JOINTS LOCATED AS SHOWN.
4. CONTRACTOR SHALL ADJUST JOINT SPACING AS NEEDED TO CONFORM TO FIELD CONDITIONS. MAX TRANSVERSE SPACING IS 18 FT. MAX LONGITUDINAL JOINT SPACING IS 16 FT.



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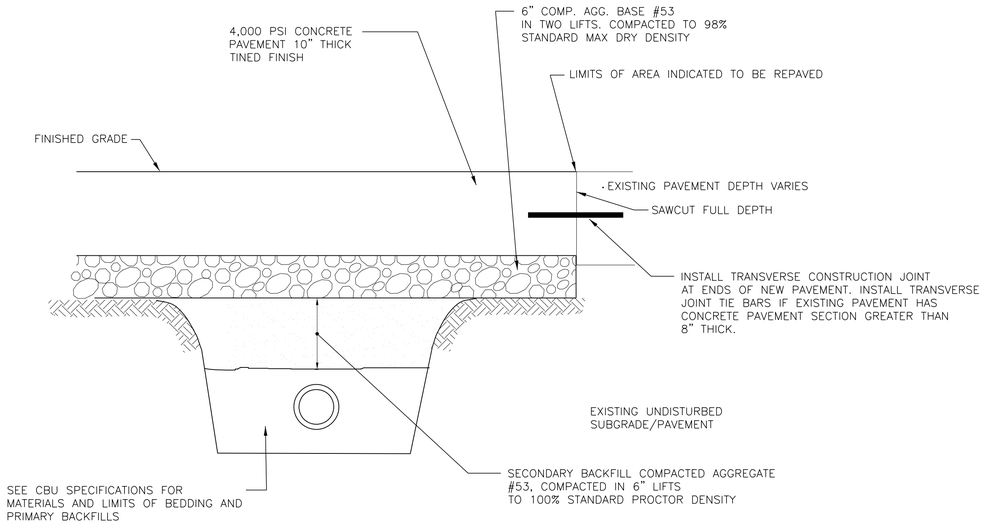
CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

SURFACE RESTORATION PLAN

DONOHUE & ASSOCIATES

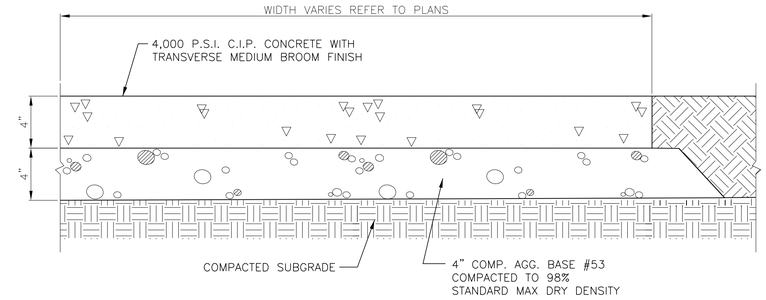
Sheet No. 12

Drawing No. **PJ2**



STREET RESTORATION R1

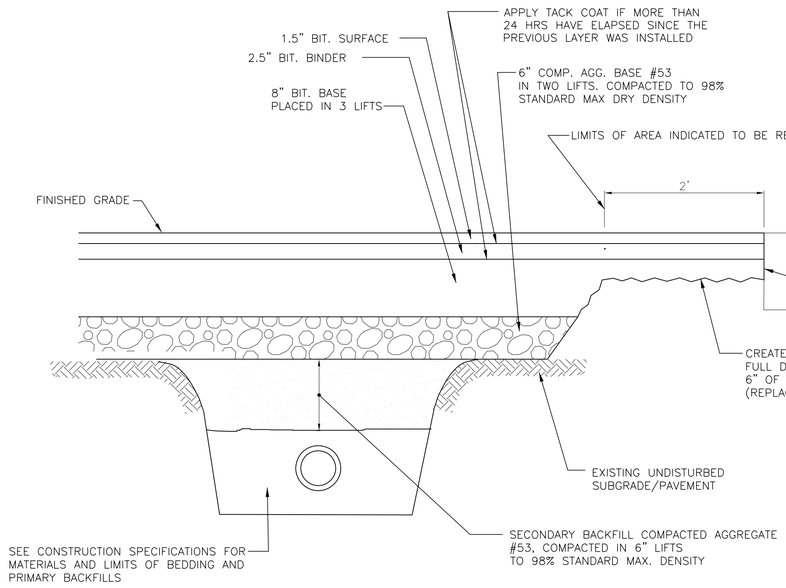
NTS



4" CONCRETE WALK FOR SIDEWALKS C1

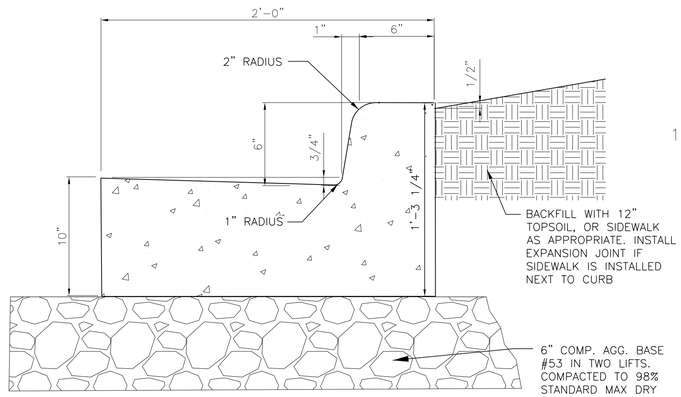
NTS

NOTES: SEE PLANS FOR LOCATIONS.
SIDEWALKS SHALL NOT EXTEND ACROSS DRIVEWAYS.



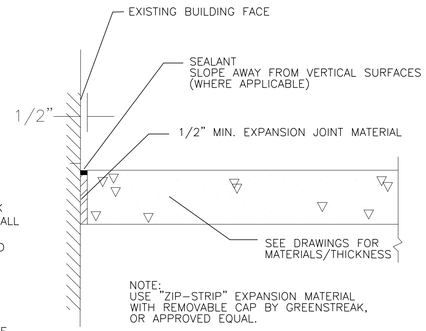
BITUMINOUS STREET RESTORATION R5

NTS



CONCRETE CURB AND GUTTER 2 FT C2

NTS



EXPANSION JOINT AT EXISTING BUILDINGS

NTS

THE FOLLOWING STANDARD DETAILS FROM THE CITY OF BLOOMINGTON UTILITIES CONSTRUCTION SPECIFICATIONS FOR WASTEWATER, WATER AND STORM PROJECTS ARE KNOWN TO BE NEEDED AND ARE SPECIFICALLY INCORPORATED INTO THESE DETAIL DRAWINGS (OTHERS MAY BE NEEDED IF SPECIFIC CIRCUMSTANCES WARRANT):

1. STANDARD SANITARY MANHOLE (STANDARD DETAIL 1)
2. EXTERNAL DROP PIPE DETAIL FOR SANITARY MANHOLE (STANDARD DETAIL 2)
3. STANDARD FIRE HYDRANT AND CONNECTION DETAIL (STANDARD DETAIL 8)
4. BEDDING AND BACKFILL DETAIL FOR PVC AND HDPE PIPE (STANDARD DETAIL 11)
5. BEDDING AND BACKFILL DETAIL FOR ALL RIGID PIPES (STANDARD DETAIL 12)
6. STANDARD SANITARY LATERAL CLEANOUT FOR 4" AND 6" PIPES (STANDARD DETAIL 19)

THE FOLLOWING STANDARD DRAWINGS FROM THE INDIANA DEPARTMENT OF TRANSPORTATION ARE KNOWN TO BE NEEDED AND ARE SPECIFICALLY INCORPORATED INTO THESE DETAIL DRAWINGS (OTHERS MAY BE NEEDED IF SPECIFIC CIRCUMSTANCES WARRANT):

1. INLET TYPE A (STANDARD DRAWING E 720-INST-01)
2. INLET TYPE J (STANDARD DRAWING E 720-INST-06)
3. INLET TYPE M (STANDARD DRAWING E 720-INST-07)
4. FLAT TOP GRATE CASTING TYPE 2 (STANDARD DRAWING E 720-MHCA-01)
5. SOLID MANHOLE CASTING TYPE 4 (STANDARD DRAWING E 720-MHCA-02)
6. BEEHIVE CASTING TYPE 7 (STANDARD DRAWING E 720-EDCA-01)
7. CURB AND GUTTER CASTING TYPE 8 (STANDARD DRAWINGS E 720-ICCA-04, -05, -06)
8. CURB AND GUTTER CASTING TYPE 10 (STANDARD DRAWINGS E 720-ICCA-08, -09, -09A)
9. CONCRETE PAVEMENT LONGITUDINAL JOINT (STANDARD DRAWING E 503-CCPJ-02)
10. CONCRETE PAVEMENT TRANSVERSE CONSTRUCTION JOINT (STANDARD DRAWING E 503-CCPJ-05)
11. CONCRETE PAVEMENT LONGITUDINAL CONSTRUCTION JOINT (STANDARD DRAWING E 503-CCPJ-07)
12. ALL CONSTRUCTION SIGNS AND CONSTRUCTION ZONE SIGN PLACEMENT DRAWINGS
13. APPROPRIATE DRIVEWAY AND ENTRANCE DRAWINGS
14. APPROPRIATE CURB RAMP DRAWINGS

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PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

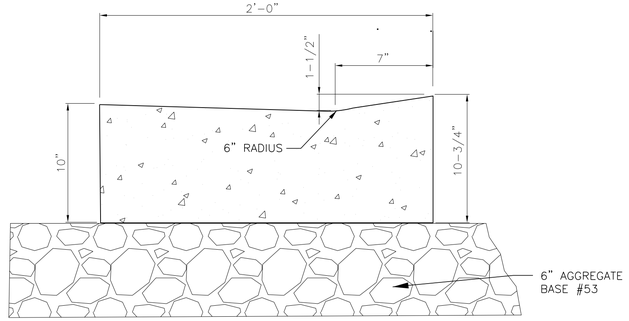
CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
PAVING, CURB, SIDEWALK DETAILS

DONOHUE & ASSOCIATES

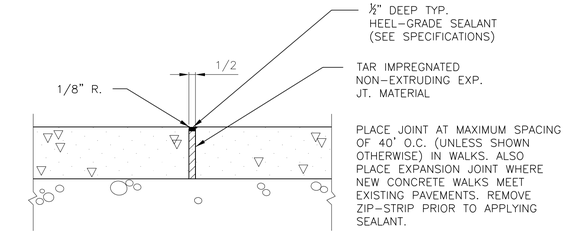
Sheet No. 13

Drawing No. **M1**



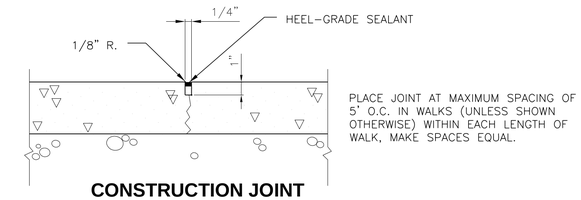
DEPRESSED CONCRETE CURB AND GUTTER 2 FT C3

NTS



EXPANSION JOINT

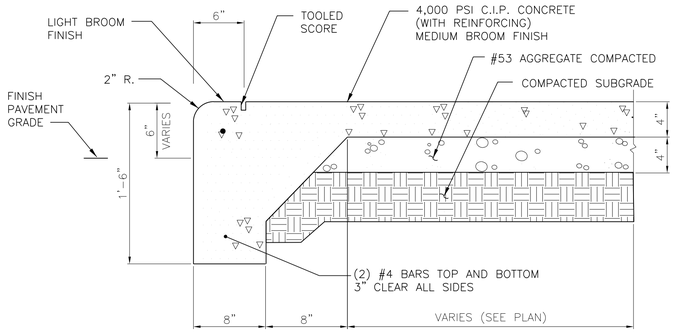
NOTE:
EXPANSION JOINT MATERIAL SHALL BE "ZIP-STRIP" EXPANSION MATERIAL WITH REMOVABLE CAP BY GREENSTREAK OR APPROVED EQUAL.



CONSTRUCTION JOINT

JOINTING IN WALKS

NTS

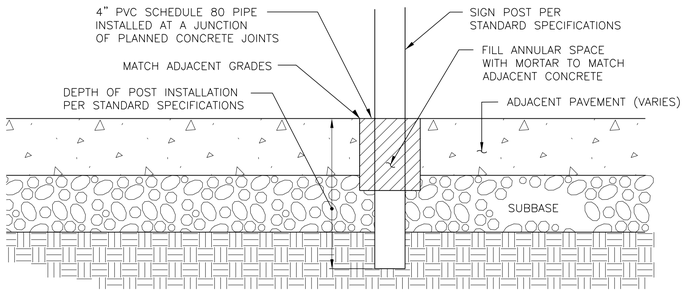


INTEGRAL BARRIER CURB AND SIDEWALK C1 AND C5

NTS

NOTES:

1. HAND FINISH CURB TO A 6" DEPTH (TYP.).
2. THIS DETAIL TO BE USED WHERE CONCRETE WALKS C1 ARE TO BE RECONSTRUCTED NEXT TO NEW BARRIER CURBS C5 AS SHOWN ON SURFACE RESTORATION DETAILS.

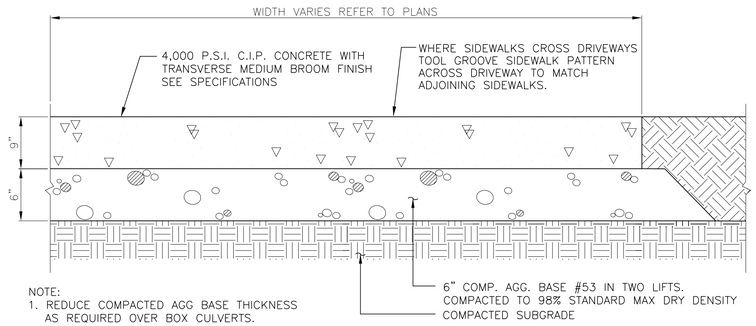


SIGN INSTALLATIONS IN SIDEWALKS

NTS

SIGN RELOCATION NOTES:

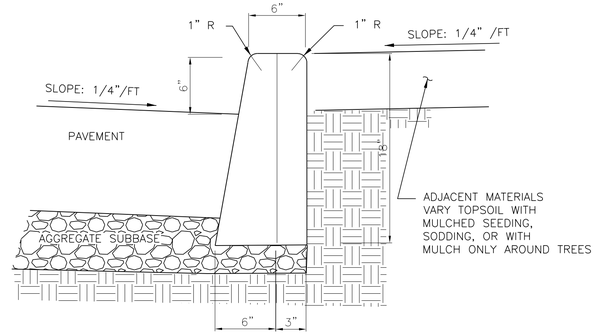
1. CONTRACTOR WILL COORDINATE WITH CITY TO HAVE EXISTING SIGNS REMOVED AT APPROPRIATE TIMES.
2. CONTRACTOR TO INSTALL PVC INSERTS AS SHOWN FOR OWNER'S USE IN REINSTALLING SIGNS.
3. ALL EXISTING SIGNS WILL BE RESET BY OWNER IN CONTRACTOR PROVIDED INSERTS UNLESS SHOWN OTHERWISE. NEW SIGNS WILL BE PROVIDED BY THE OWNER.



NOTE:
1. REDUCE COMPACTED AGG BASE THICKNESS AS REQUIRED OVER BOX CULVERTS.

9" CONCRETE PAVEMENT FOR DRIVES AND ALLEYS C4

NTS



6" CONCRETE BARRIER CURBS WITH TURF BACK OF CURB C5

NTS

NOTE: SEE PLANS FOR LOCATIONS.

NOTES:

1. DETAIL SHOWN HERE APPLIES WHEN NEW CURB IS TO BE RECONSTRUCTED FULL DEPTH NEXT TO AN EXISTING OR NEW ASPHALT PAVEMENT WITHOUT AN ADJACENT SIDEWALK.
2. USE INTEGRAL CURB & WALK DETAIL INSTEAD IF AN ADJACENT SIDEWALK MUST ALSO BE REPLACED.

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NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

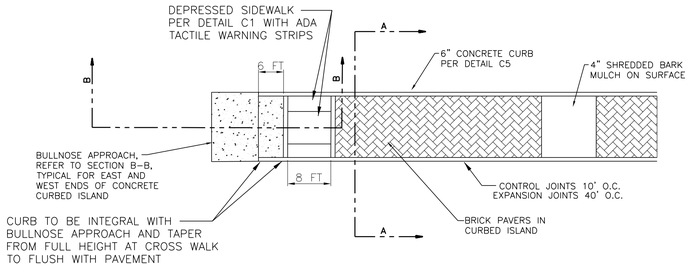
CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
SIDEWALK AND CURB DETAILS

DONOHUE & ASSOCIATES

Sheet No. 14

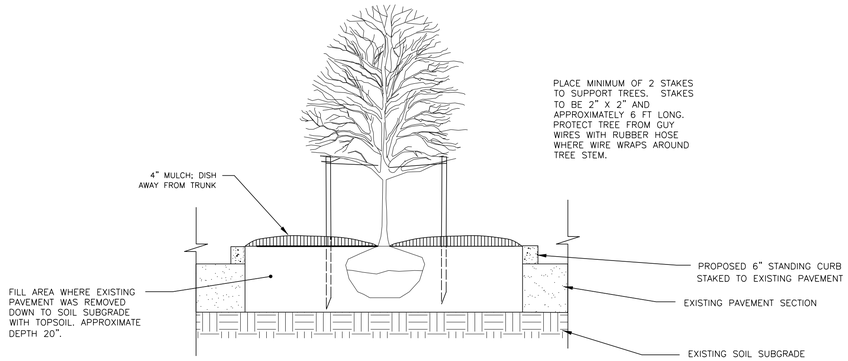
Drawing No. **M2**



NOTE: REFER TO SHEET SR2 FOR DETAIL LOCATION

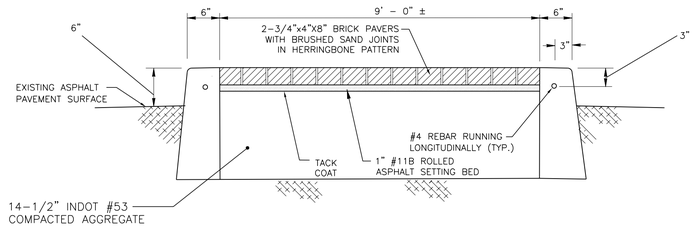
3RD STREET CONCRETE CURBED ISLAND C7

NTS



BACKFILL AND TREE MULCHING DETAIL

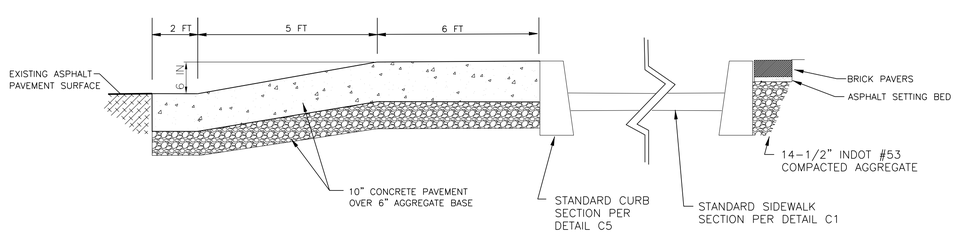
NTS



SECTION A-A

NTS

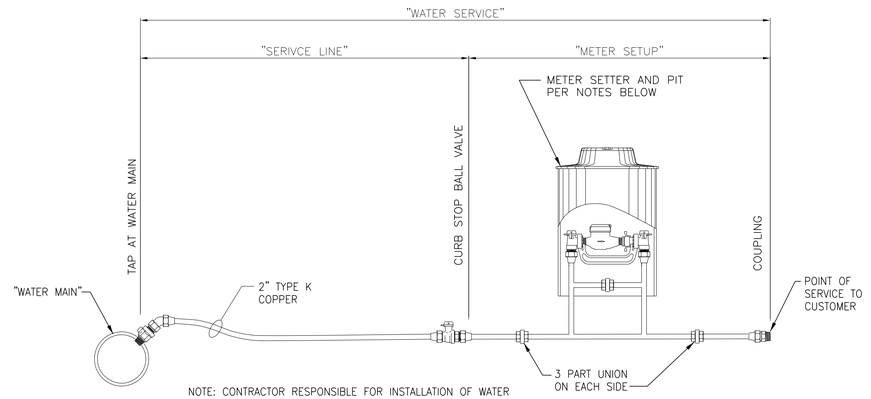
NOTE: BRICK PAVERS TO BE PATHWAY PAVER FULL RANGE COLOR BY PINEHALL



SECTION B-B CURBED BULLNOSE APPROACH

NTS

SEE PLANS FOR METER PIT LOCATIONS "M" – METER SYMBOL



NOTE: CONTRACTOR RESPONSIBLE FOR INSTALLATION OF WATER SERVICE AS SHOWN ABOVE

METER SETTER / PIT NOTES

1. METER SETTER SHALL BE: FORD 2" COPPER SETTER (CATALOG #VBHH77–21HBHC–11–77) AND INCLUDE HIGH BYPASS LINE PER MANUFATURER.
2. TOP OF YOKE TO BE SET MIN. 18" AND MAX 24" BELOW SURFACE GRADE.
3. METER PITS BY WATERWORKS 30"x30" PLASTIC WITH (CBU IIJ–7) EXTENSION RING 20"x30" (FORD FL–30) AND (CBU IIJ–109) ROUND PIT RING AND #10 LID (FORD #10 LID AND RING) ALL METER LIDS TO BE 20" IN DIAMETER.
4. CBU TO INSTALL METER ONCE SETTER AND PIT ARE INSTALLED BY CONTRACTOR.

TYPICAL 2" WATER SERVICE DETAIL

NTS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	PNE
Drawn By	PNE
Checked By	TJM
Approved By	PNE
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Project No.	11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER 12/2/11

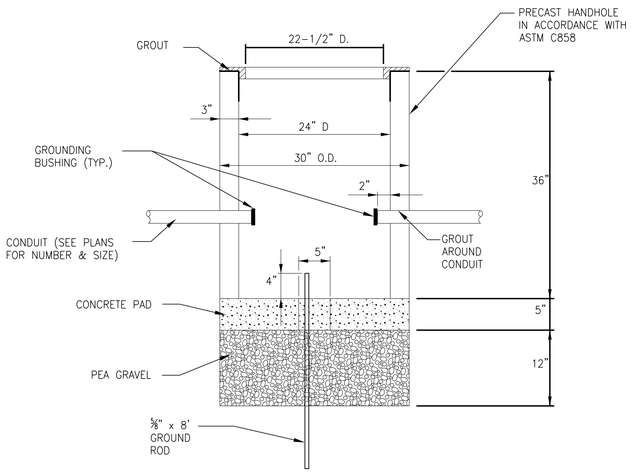
CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
IRRIGATION SYSTEM AND HANDICAPPED SYMBOL

DONOHUE & ASSOCIATES

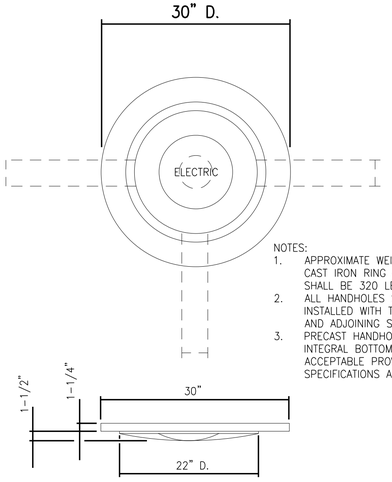
Sheet No. 15

Drawing No. **M3**

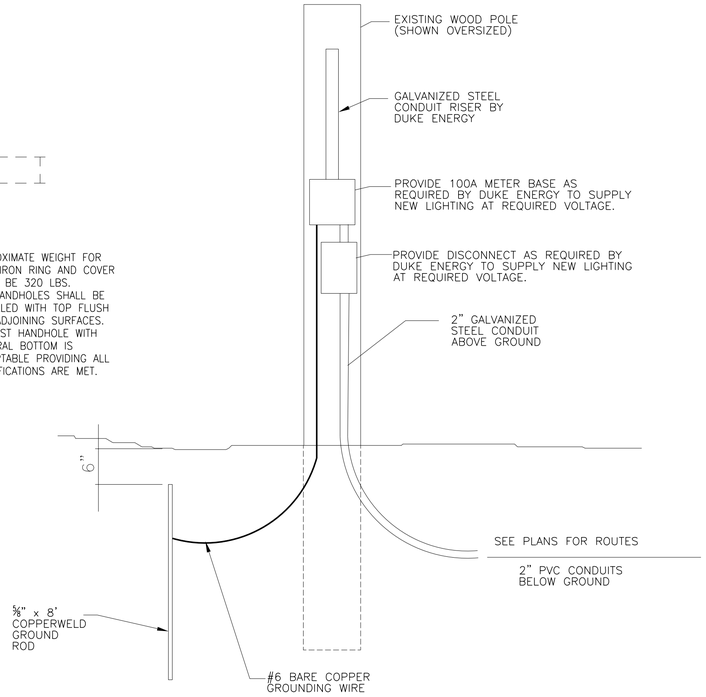


STREET LIGHTING HANDHOLE

NTS



NOTES:
1. APPROXIMATE WEIGHT FOR CAST IRON RING AND COVER SHALL BE 320 LBS.
2. ALL HANDHOLES SHALL BE INSTALLED WITH TOP FLUSH AND ADJOINING SURFACES.
3. PRECAST HANDHOLE WITH INTEGRAL BOTTOM IS ACCEPTABLE PROVIDING ALL SPECIFICATIONS ARE MET.



SERVICE POINT NOTES:

1. CONTRACTOR SHALL PROVIDE NECESSARY MATERIALS FOR MOUNTING ELECTRICAL EQUIPMENT TO EXISTING WOOD POLE.
2. THE SERVICE POINT FOR THE NEW LIGHTS ALREADY HAS AN AREA LIGHT ON IT. CONTRACTOR TO COORDINATE WITH DUKE TO MAINTAIN SERVICE TO EXISTING LIGHTING.
2. THIS DETAIL FOR CONCEPTUAL USE ONLY. CONTRACTOR SHALL COORDINATE THE REQUIREMENTS IN THESE PLANS AND SPECIFICATIONS WITH THE EQUIPMENT THEY INTEND TO USE AND ARE TO SUBMIT A SERVICE POINT LAYOUT DRAWING FOR REVIEW BY DUKE ENERGY.

LIGHTING REMOVAL CONTINUITY:

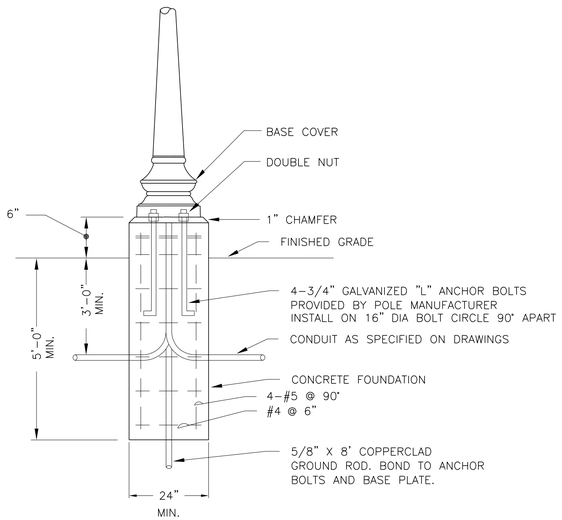
CONTRACTOR TO COORDINATE WITH DUKE ENERGY TO HAVE EXISTING LIGHTS REMOVED AT APPROPRIATE TIME FOR EACH BLOCK. COORDINATE LIGHTING REMOVAL WITH CITY TO MINIMIZE DURATION OF TIME WHEN NO LIGHTING IS PROVIDED.

LIGHTING SERVICE PEDESTAL:

SERVICE PEDESTAL SHALL BE TESCO CONTROLS MODEL 26-000, OR EQUAL, SUITABLE FOR 100 AMP 240 VOLT SERVICE. METER SOCKET NOT REQUIRED IF METER INSTALLED AT SERVICE POINT. CIRCUITS TO BE AS SHOWN IN TABLE BELOW. SERVICE PEDESTAL TO CONTAIN LIGHTING CONTACTOR AND PHOTOCELL CONTROLS FOR ALL LIGHTING CIRCUITS. CABINET SHALL BE HOT DIPPED GALVANIZED STEEL FINISHED OR PAINTED IN COLOR SELECTED BY CITY. ENCLOSURE DOOR SHALL BE HINGED WITH PADLOCKABLE LATCH AND NO EXPOSED NUTS, BOLTS, SCREWS, OR OTHER FASTENERS.

CONDUIT INSTALLATION NOTES:

1. ALL CONDUITS ARE TO BE 2" PVC SCH. 80 AND ARE TO BE BURIED 36" DEEP. ADVISE ENGINEER IF DIFFERENT DEPTS REQUIRED DUE TO CONFLICTS.
2. LIGHTING CIRCUITS TO BE LABELED ACCORDING TO PHASE AND CIRCUIT NUMBER AT EACH LIGHT POLE.
3. SEE PLANS FOR LOCATIONS OF CONDUIT.



STANDARD LIGHT POLE BASE DETAIL

NTS

SECOND AND WALNUT LIGHTING SERVICE PEDESTAL CIRCUITS

CIRCUIT	VOLTS	AMP RATING	CONDUCTOR	LOAD
1. STREET LIGHTS #8 & #9	120	20	2-#8, 1-#10 GND	2 LIGHTS, 2 DUPLEX OUTLETS
2. STREET LIGHTS #10 & #11	120	20	2-#6, 1-#8 GND	2 LIGHTS, 2 DUPLEX OUTLETS
3. SPARE	120	20		
4. SPARE	120	20		
5. SPARE	120	20		
6. SPARE	240	20		
7. SPARE	240	20		

NOTES:
1. ALL WIRE TO BE CONDUCTOR TYPE XHHW-2
2. ALL LIGHTS ARE TO BE 66 WATT.
3. EACH RECEPTACLE ON POLES SHALL BE GFCI 120V AND BE WEATHERPROOF WHILE IN USE.

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Designed By	PNE
Drawn By	PNE
Checked By	TJM
Approved By	PNE
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Project No.	11721
Project Date	12/2/11

PAUL N. ELLING REGISTERED NO. 890275 STATE OF INDIANA PROFESSIONAL ENGINEER
12/2/11

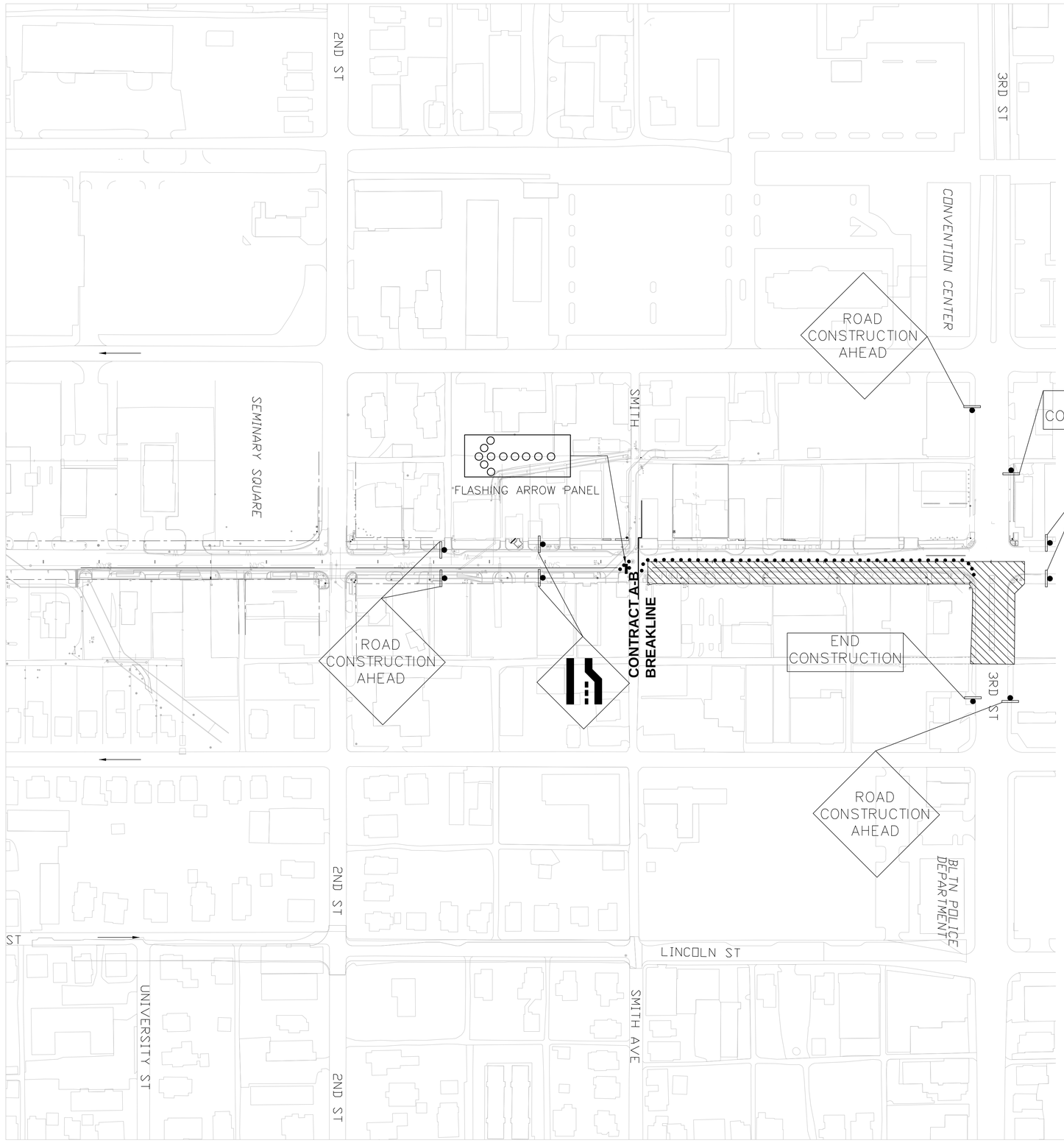
CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

MISCELLANEOUS DETAILS
ELECTRICAL CONNECTIONS

DONOHUE & ASSOCIATES

Sheet No. 16

Drawing No. **M4**



PHASE 1

1. CONSTRUCT STORM SEWER ON EAST SIDE OF WALNUT STREET.
2. CONSTRUCT SIGNAL AT THE INTERSECTION OF WALNUT STREET AND 3RD STREET.
3. MAINTAIN ONE-LANE TRAFFIC ON WEST SIDE OF WALNUT STREET THROUGH PHASE 1.
4. THIRD STREET SHALL BE CONSTRUCTED IN A MANNER WHICH WILL MAINTAIN AT LEAST 1 LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES. CONTRACTOR TO CHANNELIZE TRAFFIC ON THIRD STREET AS REQUIRED TO PROVIDE ADEQUATE CLEARANCE FOR CONSTRUCTION ACTIVITIES.

NOTES:

1. PHASE 1 SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24 HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 FT WIDE LANE THROUGH CONSTRUCTION ZONE.

LEGEND

- PHASE 1 - CONSTRUCTION ZONE
- CONSTRUCTION SIGN
- CONSTRUCTION BARRELS

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	JAB
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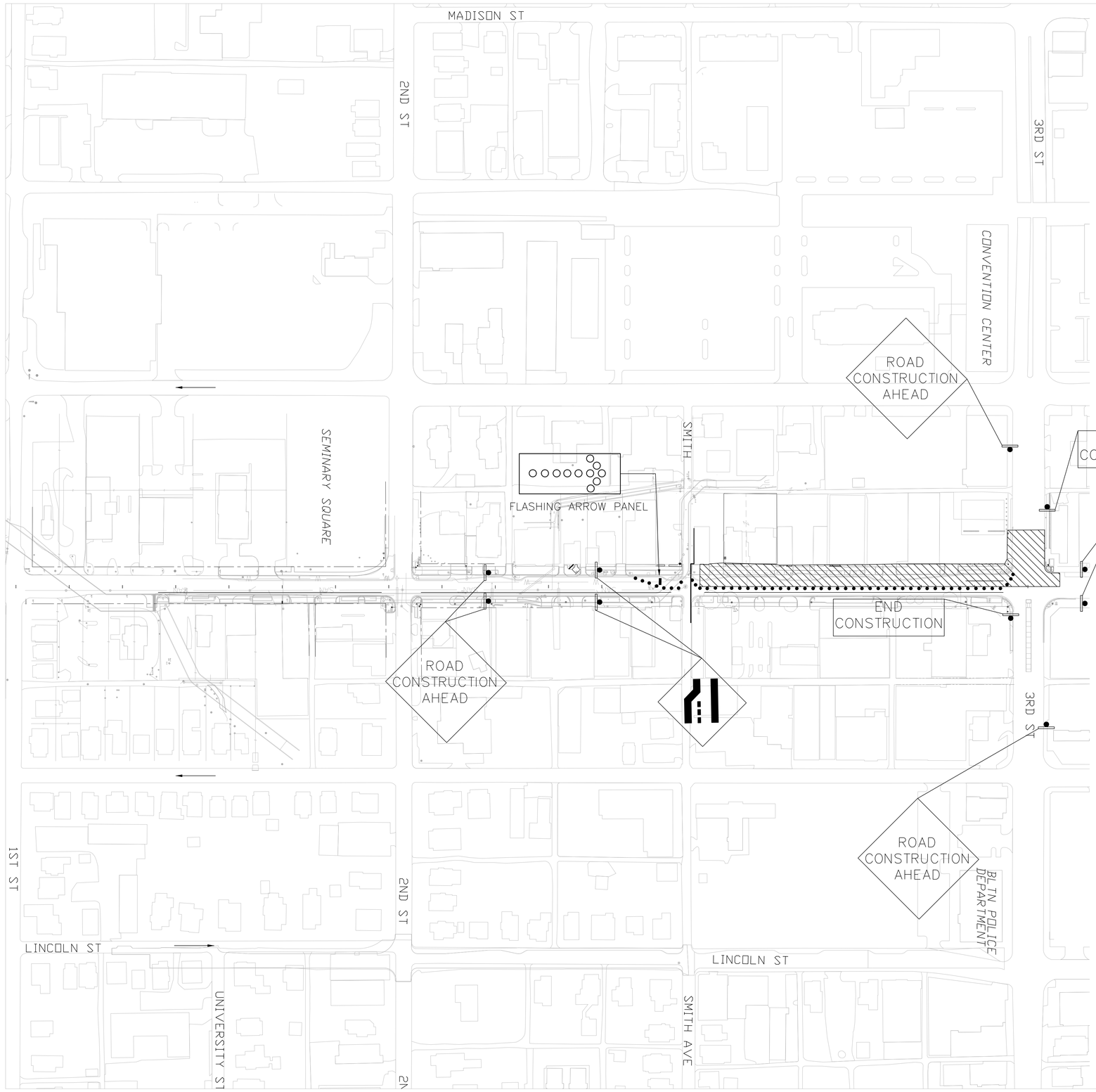
CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

PHASE 1
MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 17

Drawing No. **T-1**



PHASE 2

1. CONSTRUCT WEST SIDE OF WALNUT STREET.
2. MAINTAIN ONE-LANE TRAFFIC ON EAST SIDE OF WALNUT STREET THOUGH PHASE 2
3. THIRD STREET SHALL BE CONSTRUCTED IN A MANNER WHICH WILL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES. LEFT TURN LANE ON EASTBOUND THIRD SHALL ALSO BE MAINTAINED AT ALL TIMES. CONTRACTOR TO CHANNELIZE TRAFFIC ON THIRD STREET AS REQUIRED TO PROVIDE ADEQUATE CLEARANCE FOR CONSTRUCTION ACTIVITIES.

NOTES:

1. PHASE 2 SHALL BE DONE IN STAGES TO MINIMIZE DISTURBANCES TO BUSINESSES ALONG WALNUT STREET. PROVIDE CONTINUOUS ACCESS TO ALL BUSINESSES EXCEPT FOR SINGLE 24-0HOUR DRIVEWAY CLOSURES.
2. MAINTAIN MINIMUM OF ONE 12 FT WIDE LANE THROUGH CONSTRUCTION ZONE.

LEGEND

PHASE 2 - CONSTRUCTION ZONE

CONSTRUCTION SIGN

CONSTRUCTION BARRELS

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CITY OF BLOOMINGTON
WALNUT STREETSCAPE
CONTRACT B
BLOOMINGTON, INDIANA

PHASE 2
MAINTENANCE OF TRAFFIC

DONOHUE & ASSOCIATES

Sheet No. 18

Drawing No. **T-2**

NOTES:

1. EACH PEDESTRIAN INDICATION SHALL HAVE A PEDESTRIAN PUSH BUTTON AND SIGN R10-4b.
2. EXISTING LIGHT POLES IN THE NORTHEAST AND SOUTHEAST CORNER TO BE REMOVED BY POWER COMPANY.
3. CONTRACTOR SHALL SPLICE NEW 3C/8 CABLE WITH EXISTING CABLE.
4. PAVEMENT MARKINGS, DRAINAGE STRUCTURES, ROAD DESIGN ARE SHOWN FOR REFERENCE ONLY. SEE DETAIL SHEETS FOR THIS WORK IN PLANS.
5. HOUSING FOR ALL TRAFFIC SIGNAL INDICATIONS SHALL BE BLACK.
6. ALL STRAIN POLES SHALL BE POWDER COATED GREEN.

7'-0"

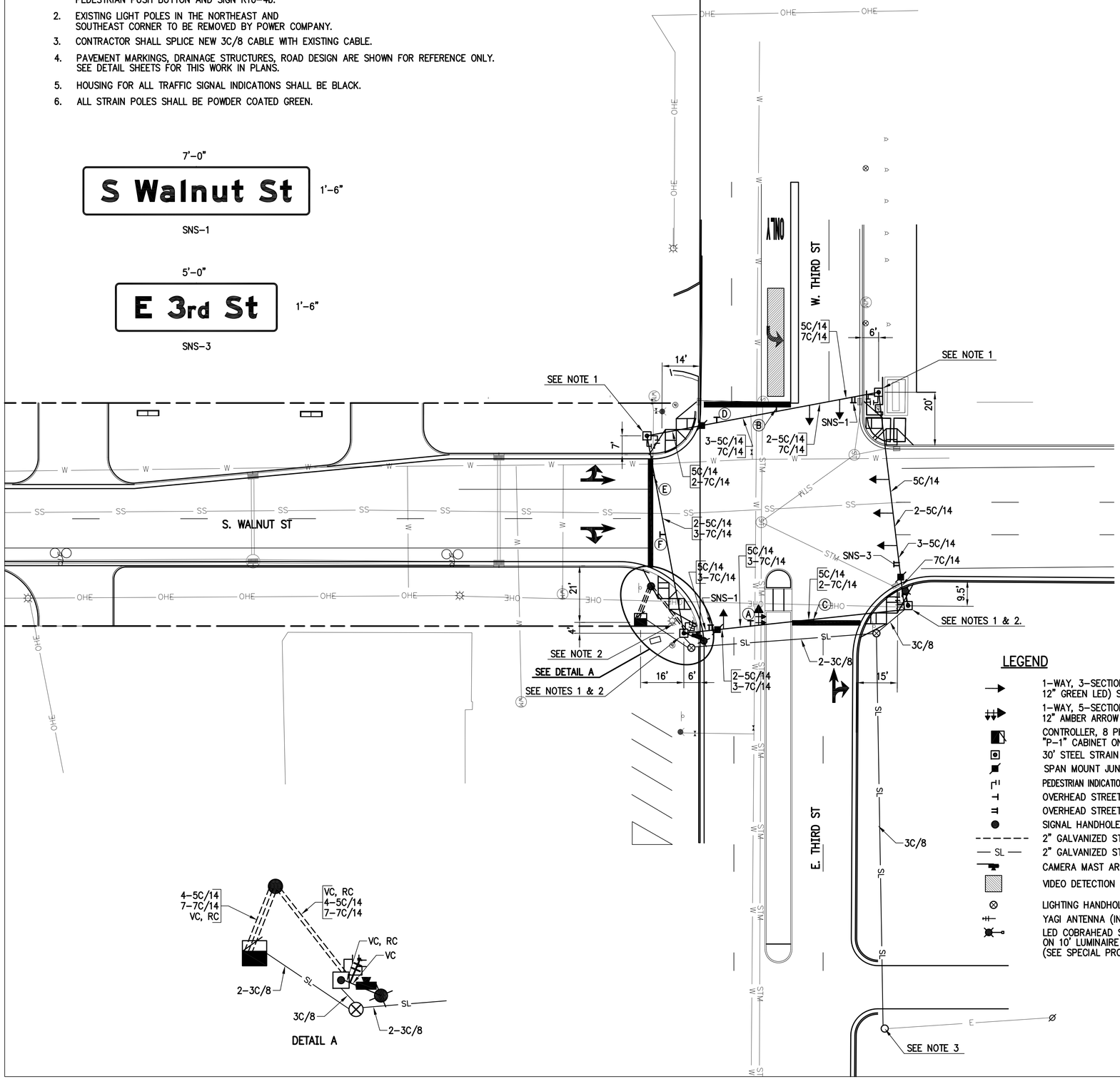
S Walnut St 1'-6"

SNS-1

5'-0"

E 3rd St 1'-6"

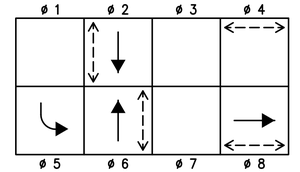
SNS-3



DETAIL A

SCALE: 1"=20'

PHASE DIAGRAM



NO PREFERENTIALITY
FLASH ALL RED

LEGEND

- 1-WAY, 3-SECTION (12" RED LED, 12" AMBER LED, 12" GREEN LED) SIGNAL INDICATION
- 1-WAY, 5-SECTION (12" RED LED, 12" AMBER LED, 12" GREEN LED, 12" AMBER ARROW LED, 12" GREEN ARROW LED) SIGNAL INDICATION
- CONTROLLER, 8 PHASE, TS2 TYPE 1, IN "P-1" CABINET ON "P-1" FOUNDATION (ECONOLITE)
- 30' STEEL STRAIN POLE AND FOUNDATION
- SPAN MOUNT JUNCTION BOX
- PEDESTRIAN INDICATION WITH PUSH BUTTON (COUNTDOWN STYLE)
- OVERHEAD STREET NAME SIGN, SINGLE MOUNT
- OVERHEAD STREET NAME SIGN, DOUBLE MOUNT
- SIGNAL HANDHOLE
- 2" GALVANIZED STEEL CONDUIT
- SL — 2" GALVANIZED STEEL CONDUIT, WITH 3C/8 CABLE
- CAMERA MAST ARM (AUTOSCOPE)
- VIDEO DETECTION ZONE
- LIGHTING HANDHOLE
- YAGI ANTENNA (INTUICOM)
- LED COBRAHEAD STREET LIGHT ON 10' LUMINAIRE ARM (SEE SPECIAL PROVISIONS)

- RC — RADIO COAXIAL CABLE (TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS)
- VC — VIDEO CAMERA CABLE (TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS)
- ø — EXISTING UTILITY POLE
- — E — EXISTING CONDUIT, WITH CABLE
- (A) R10-12 SIGN (24X30)
- (B) R3-5(L) SIGN (30X36)
- (C) R3-2 SIGN (30X30), NO LEFT TURN
- (D) R3-1 SIGN (30X30), NO RIGHT TURN
- (E) R3-6(L) SIGN (30X36)
- (F) R3-6(R) SIGN (30X36)

SIGNAL DESIGN BY:

A & F ENGINEERING CO., LLC
8365 KEYSTONE CROSSING, SUITE 201
INDIANAPOLIS, IN. 46240
(317) 202-0864

Revision Number	Revision Description	Drawn By	Checked By	Date

Designed By	DSS
Drawn By	DSS
Checked By	JTR
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Filename	
Project No.	11721
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JOSEPH T. RENGEL REGISTERED No.10302408 STATE OF INDIANA PROFESSIONAL ENGINEER

Joseph T Rengel 5-9-11

CITY OF BLOOMINGTON
S. WALNUT STREET &THIRD STREET
TRAFFIC SIGNAL MODERNIZATION
BLOOMINGTON, INDIANA

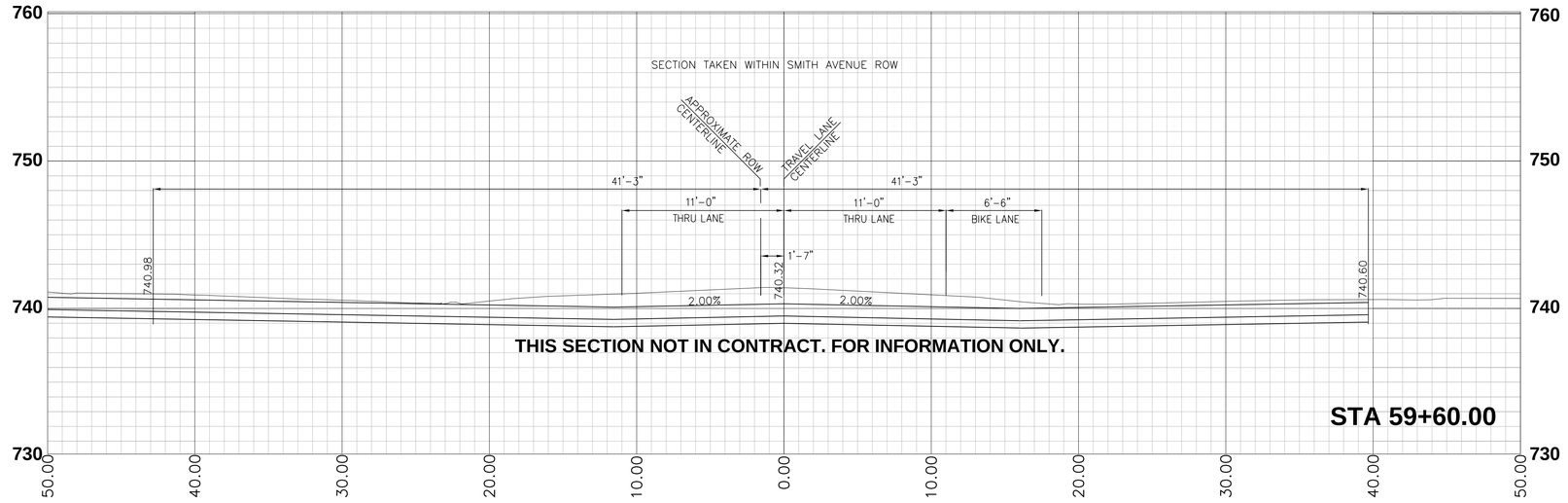
3RD STREET TRAFFIC SIGNAL

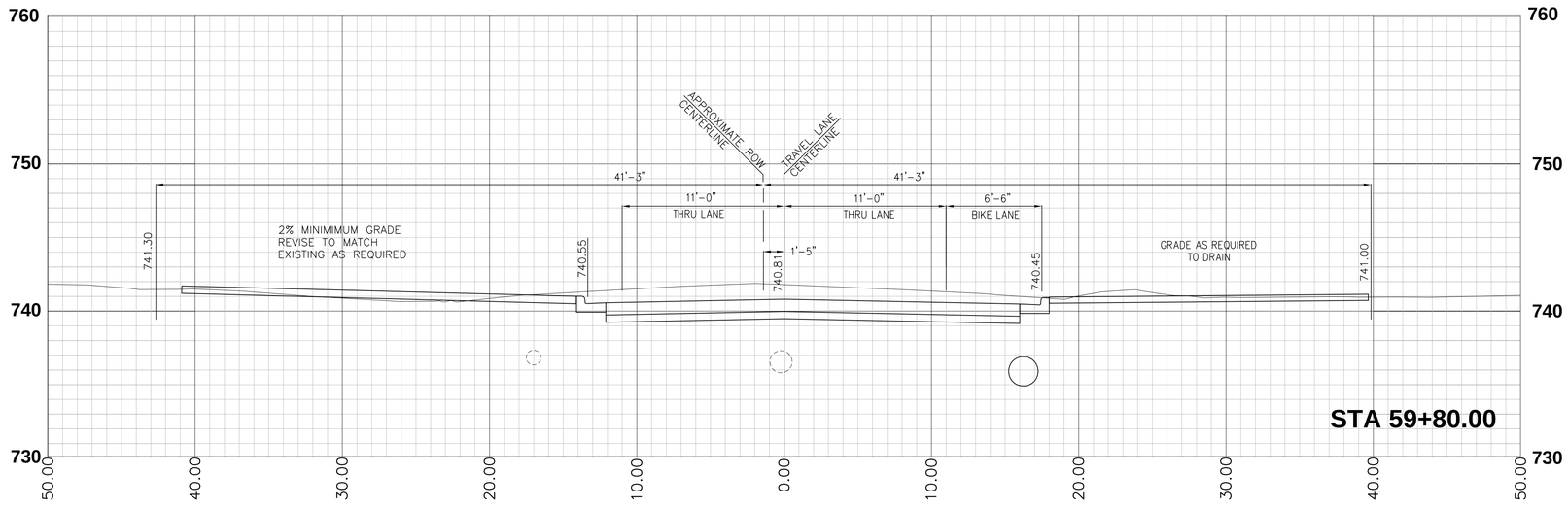
A&F ENGINEERING
Transportation Engineering Services
8365 Keystone Crossing, Suite 201, Indianapolis, IN. 46240

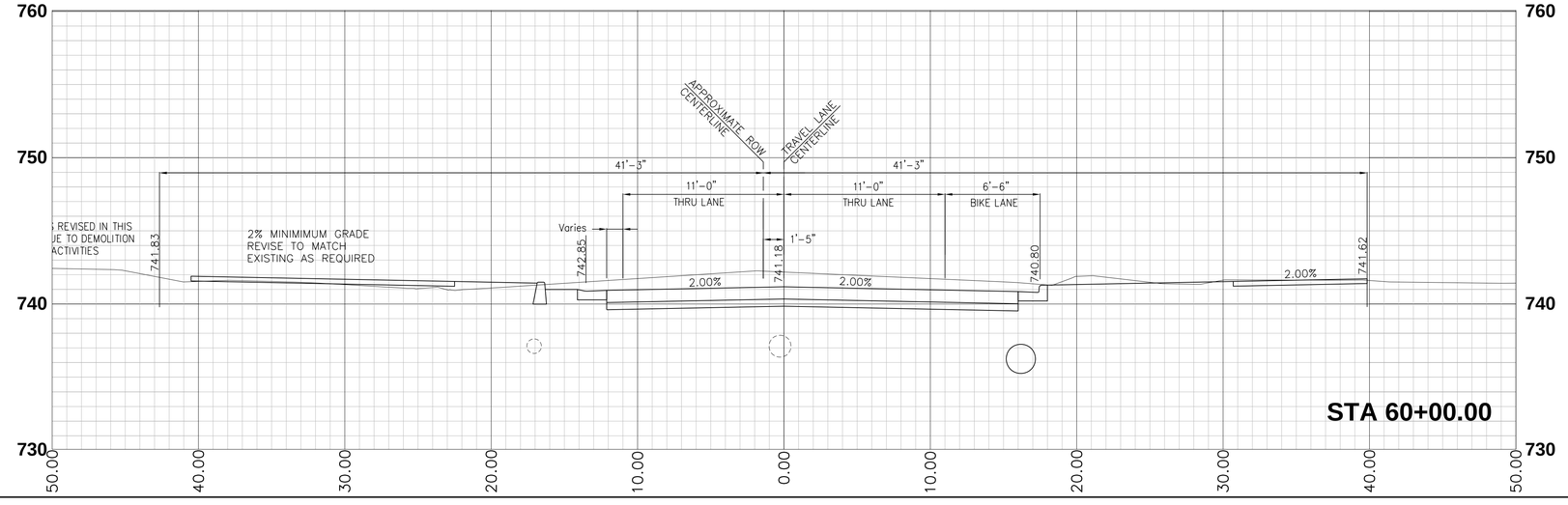
DONOHUE & ASSOCIATES

Sheet No. 19

Drawing No. TS-1







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Designed By	BDB
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PAUL N. ELLING
REGISTERED
NO. 890275
STATE OF INDIANA
PROFESSIONAL ENGINEER
12/2/11

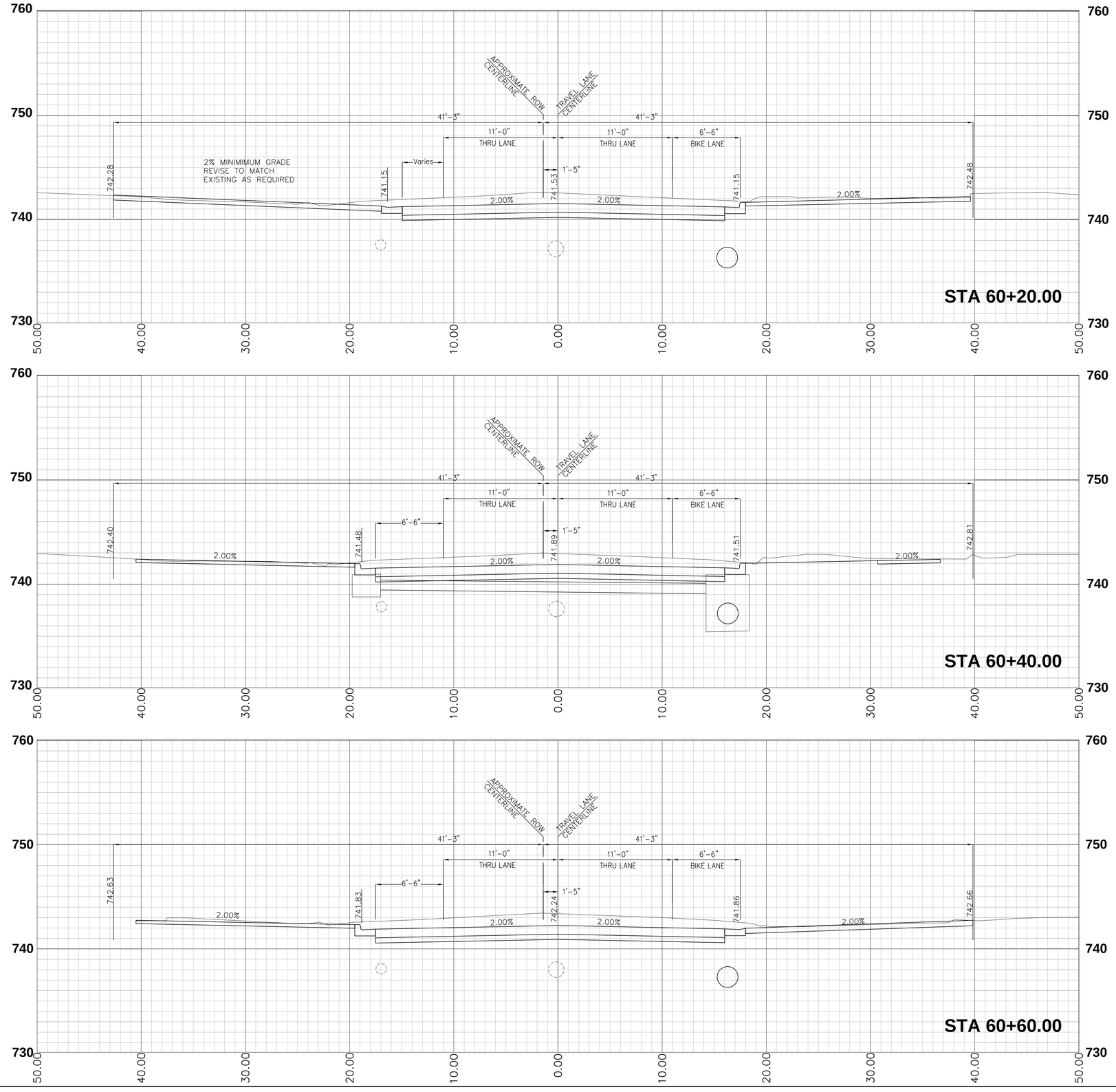
CITY OF BLOOMINGTON
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 20

Drawing No. **CS-1**



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WALNUT STREETSCAPING
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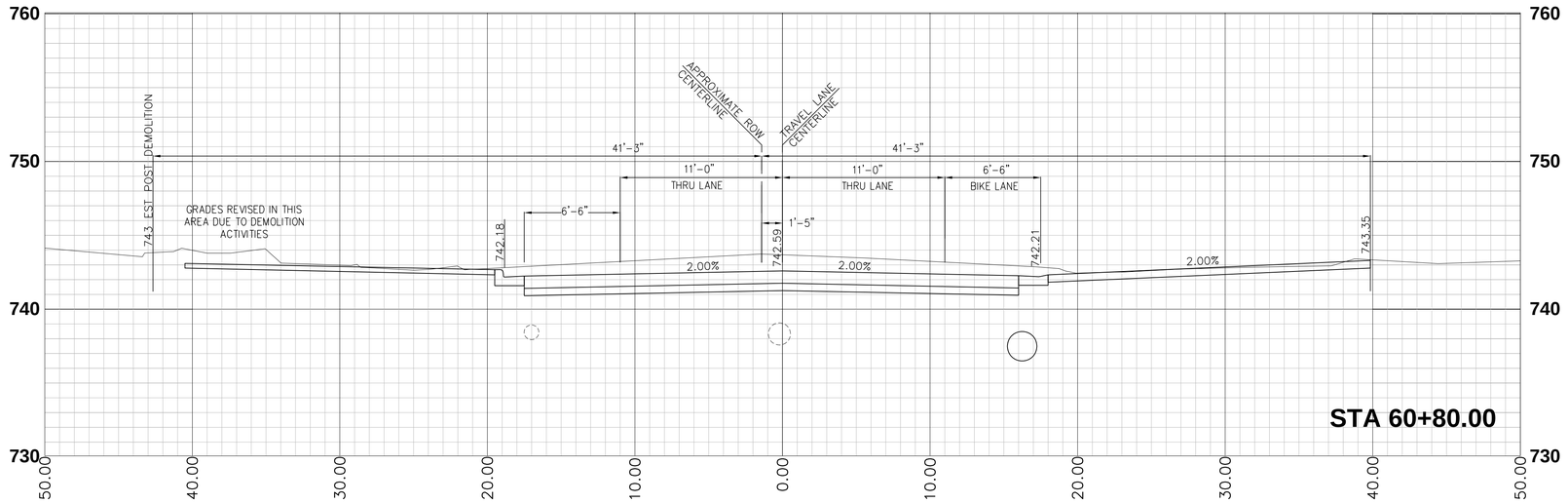
BLOOMINGTON, INDIANA

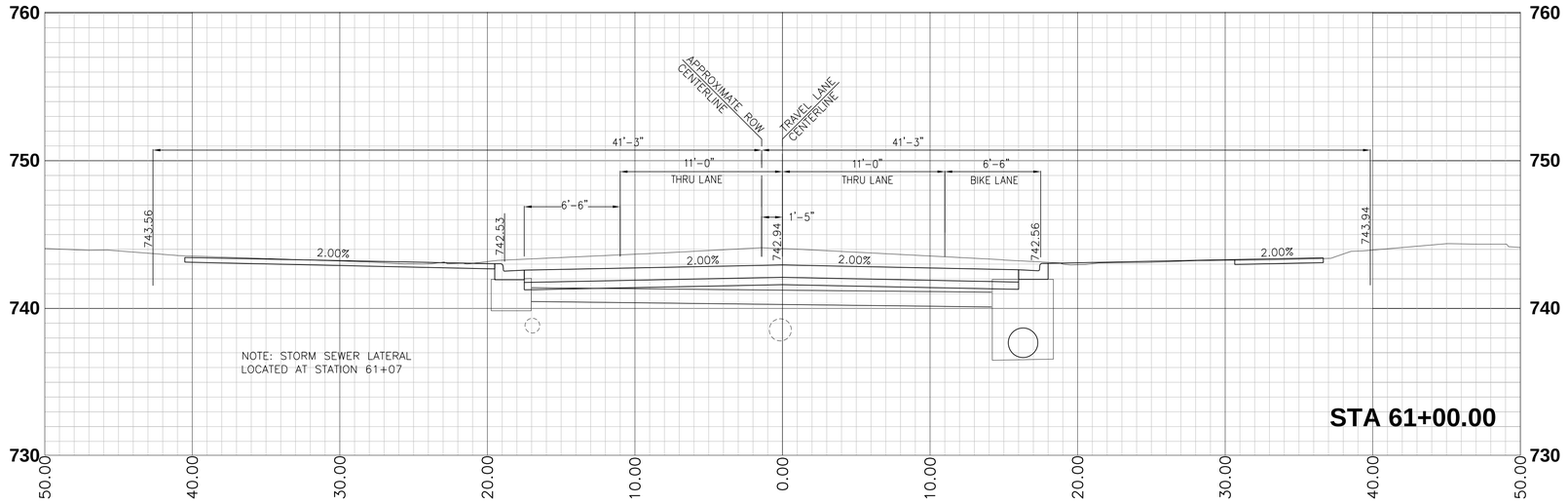
ALIGNMENT "A-1"
CROSS SECTIONS

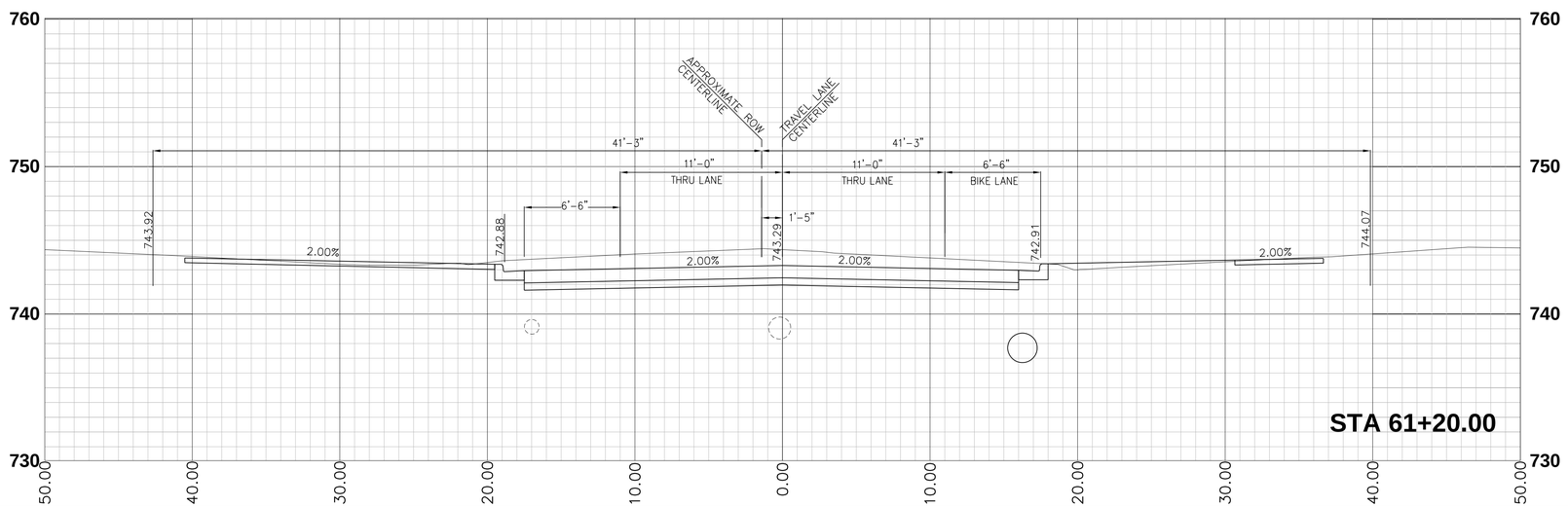
DONOHUE & ASSOCIATES

Sheet No. 21

Drawing No. **CS-2**







Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
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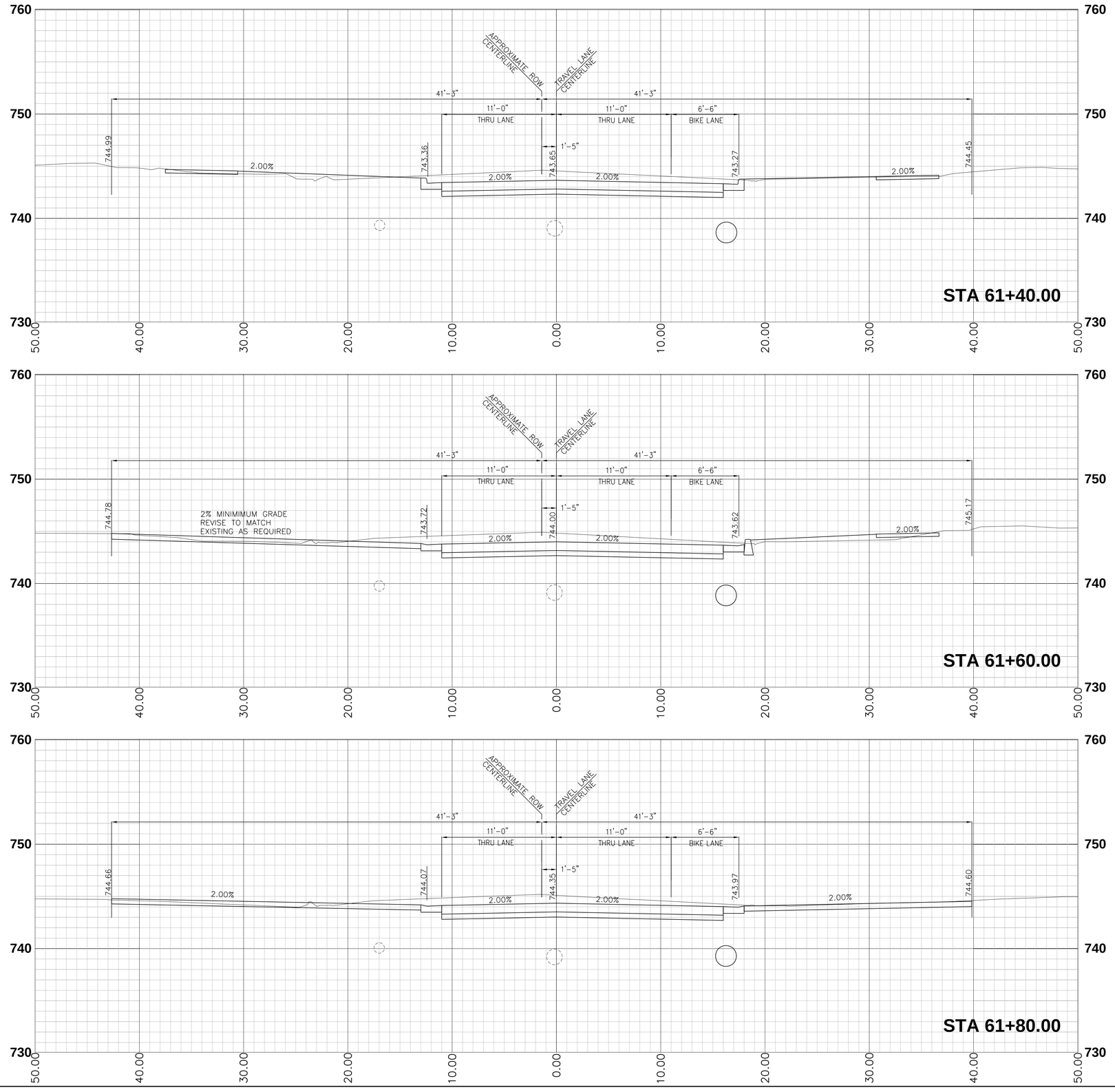
CONTRACT B
BLOOMINGTON, INDIANA

CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 22

Drawing No. **CS-3**



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Date | Checked By | Drawn By | Revision Description | Revision Number

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WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

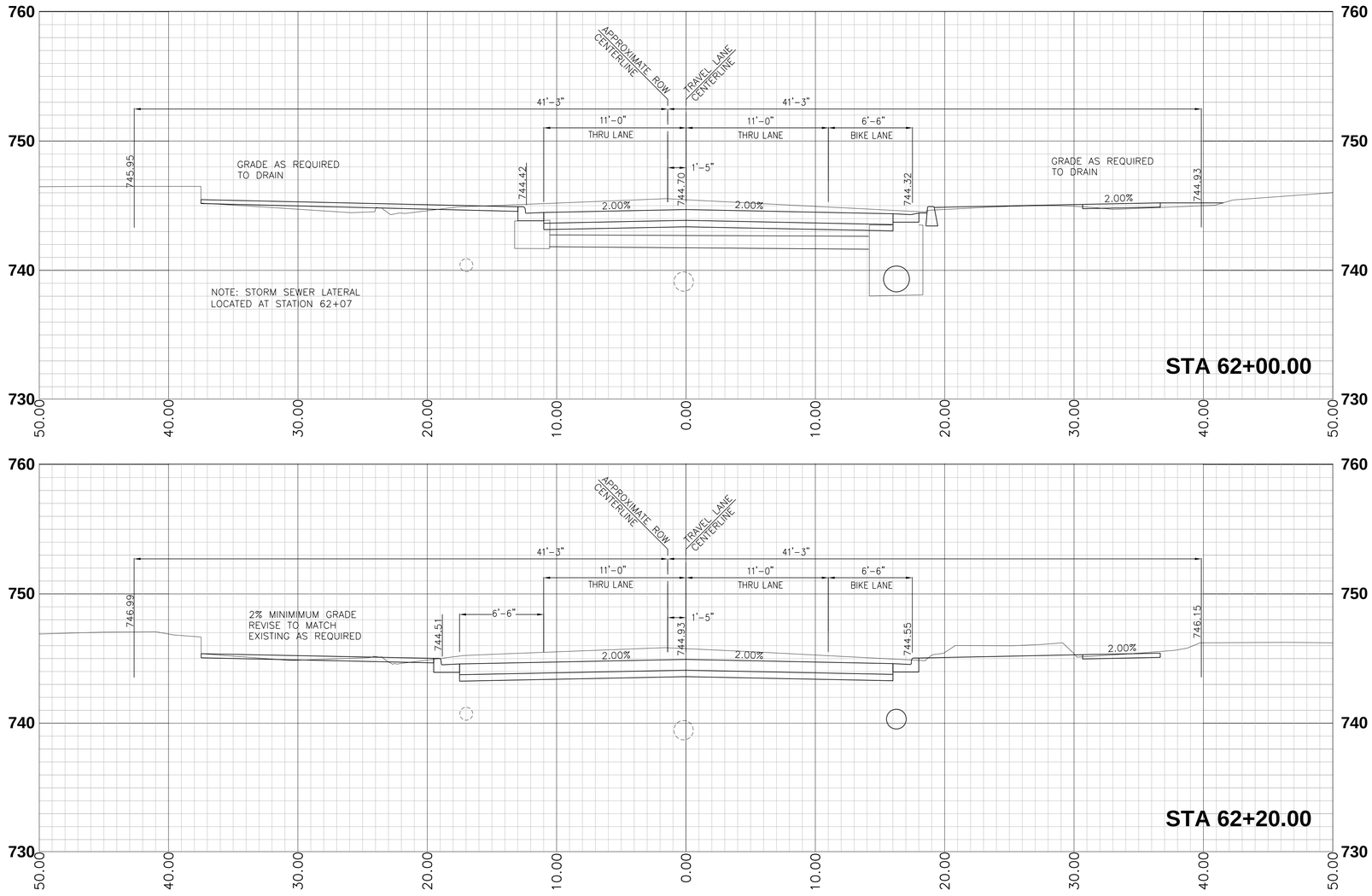
CROSS SECTIONS
ALIGNMENT "A-1"

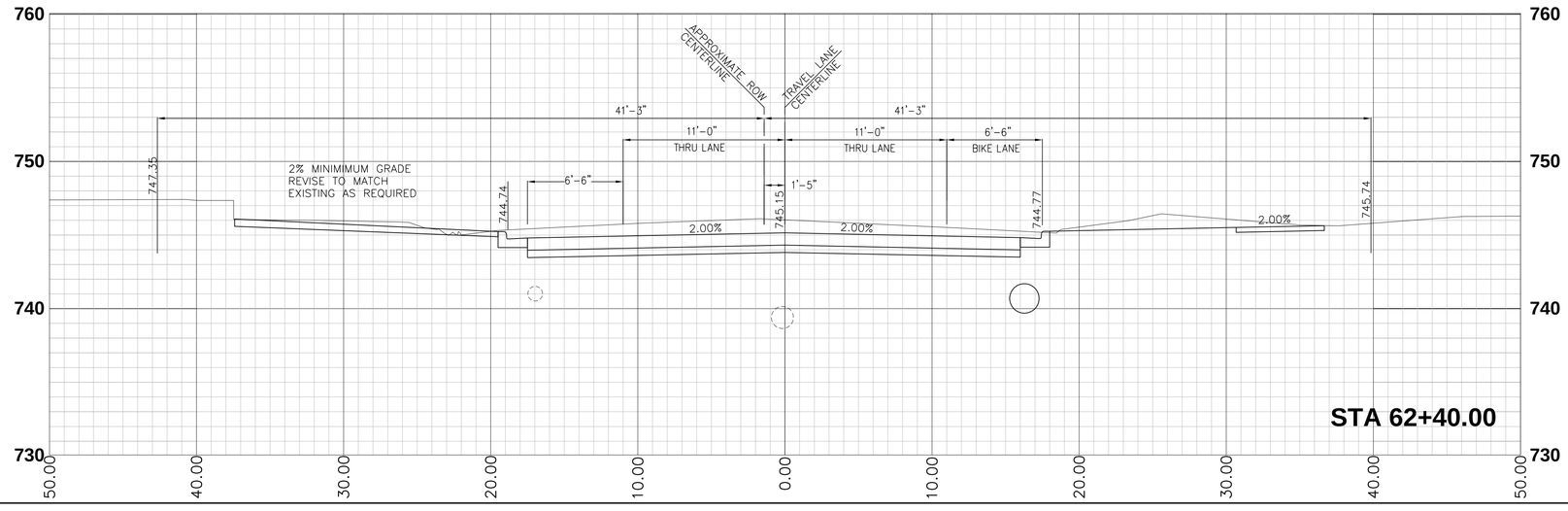
DONOHUE & ASSOCIATES

Sheet No. 23

Drawing No.

CS-4





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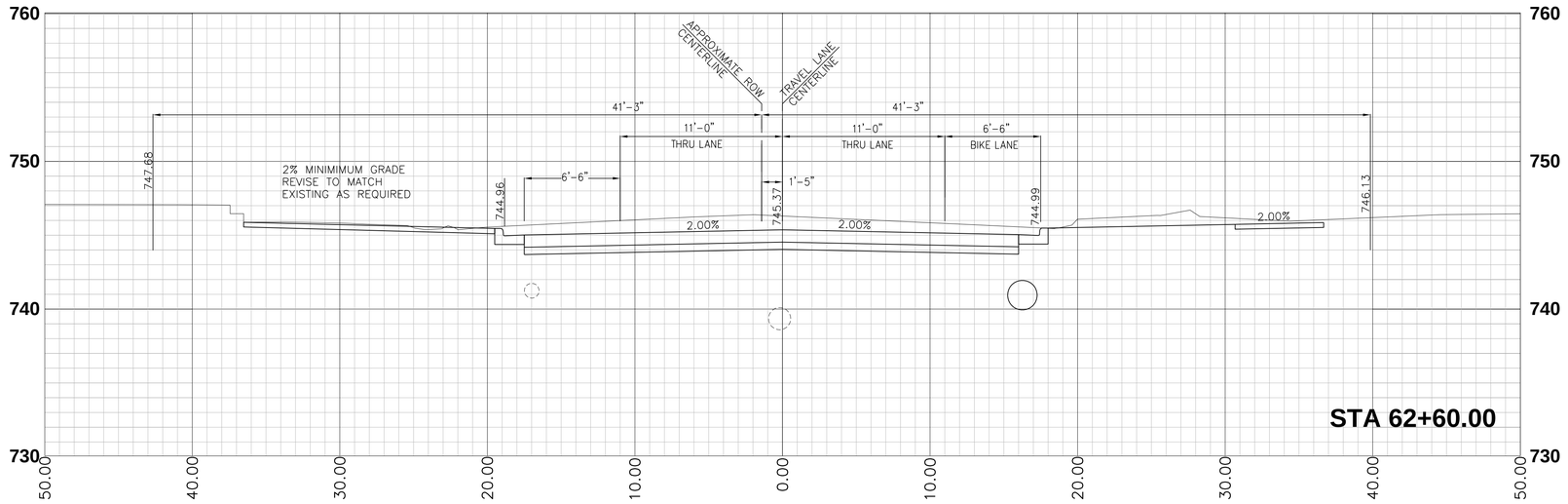
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

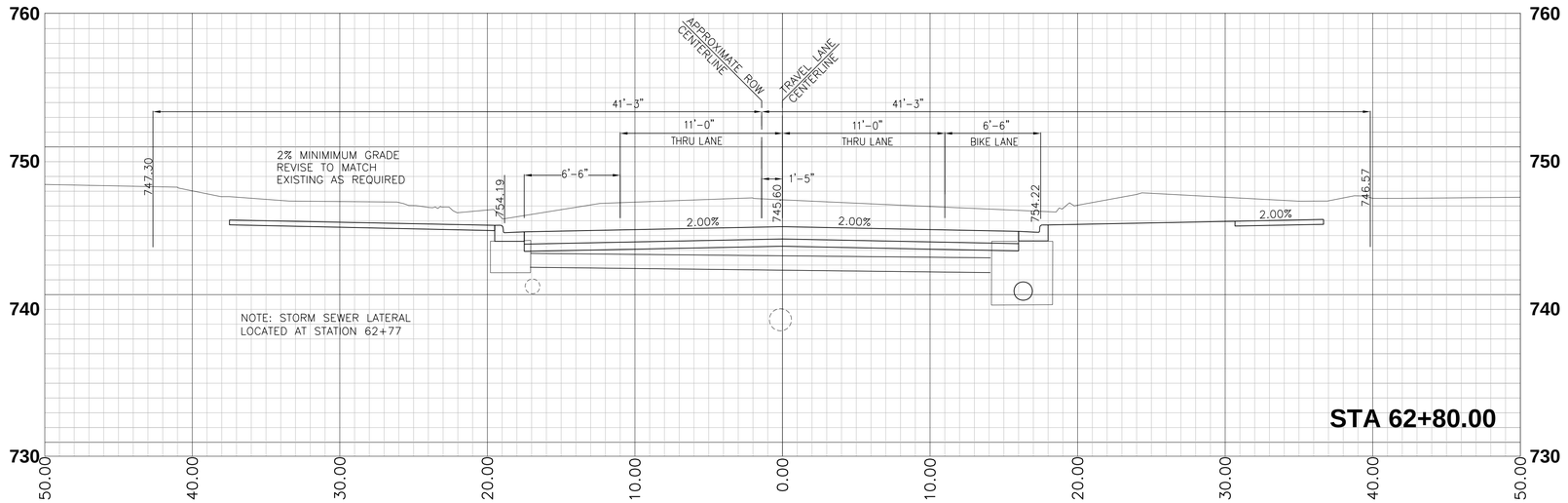
CROSS SECTIONS
ALIGNMENT "A-1"

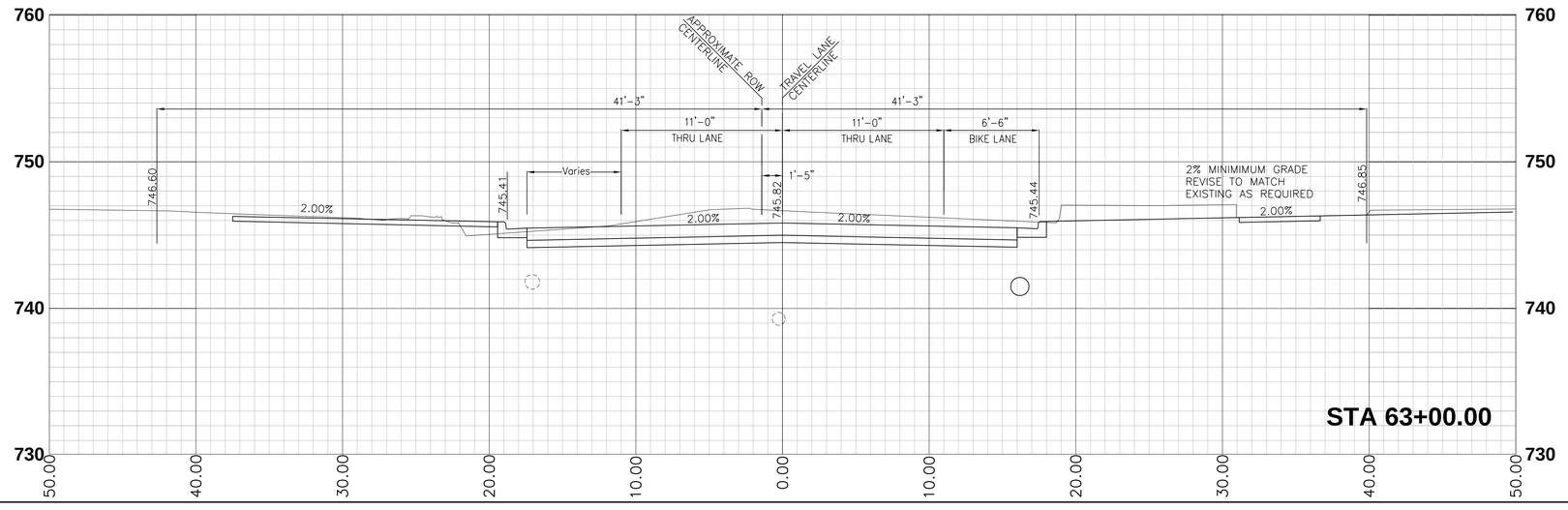
DONOHUE & ASSOCIATES

Sheet No. 24

Drawing No. **CS-5**







Date	
Checked By	
Drawn By	
Revision Description	
Revision Number	
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WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

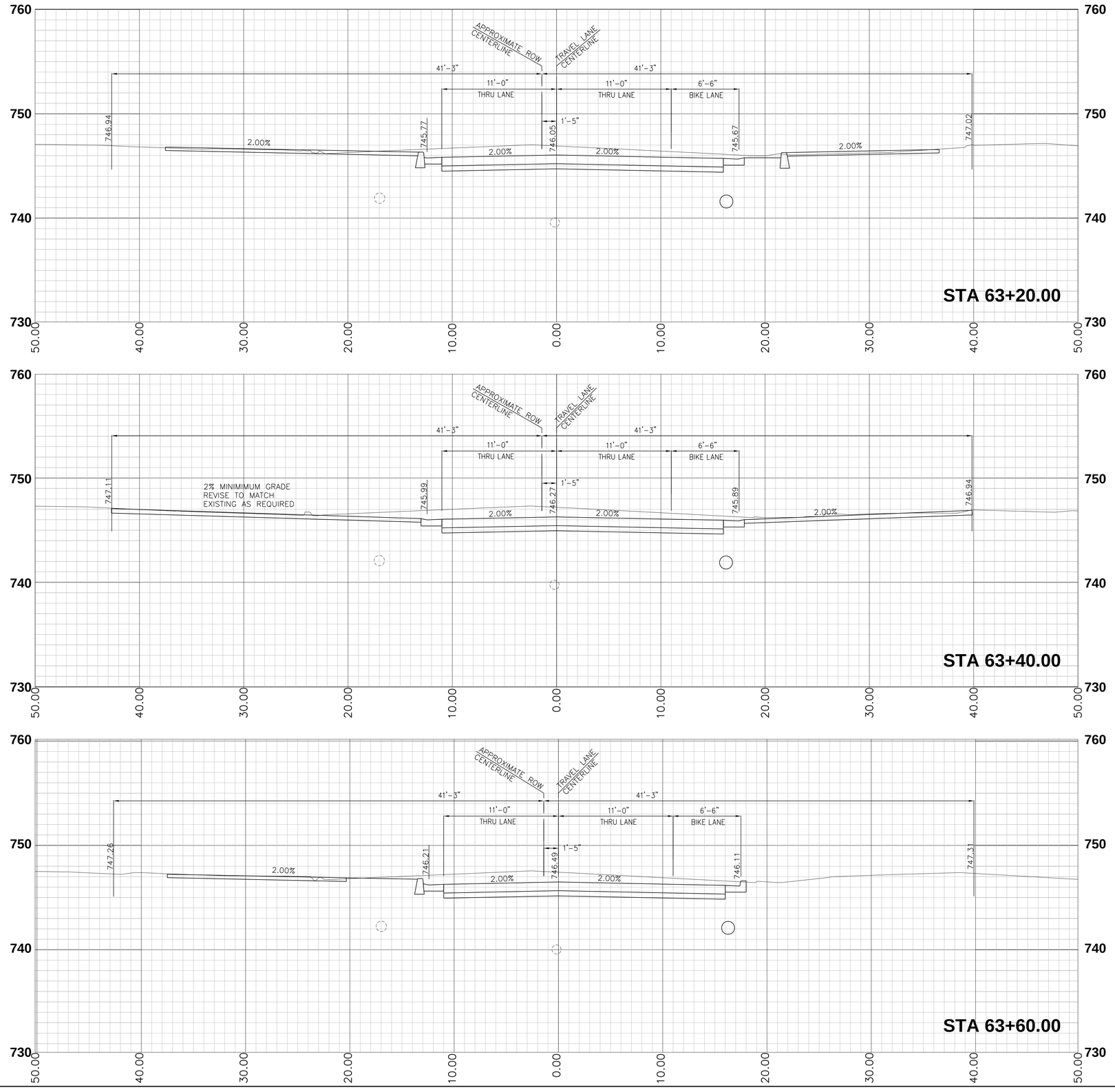
CROSS SECTIONS
ALIGNMENT "A-1"

DONOHUE & ASSOCIATES

Sheet No. 25

Drawing No.

CS-6



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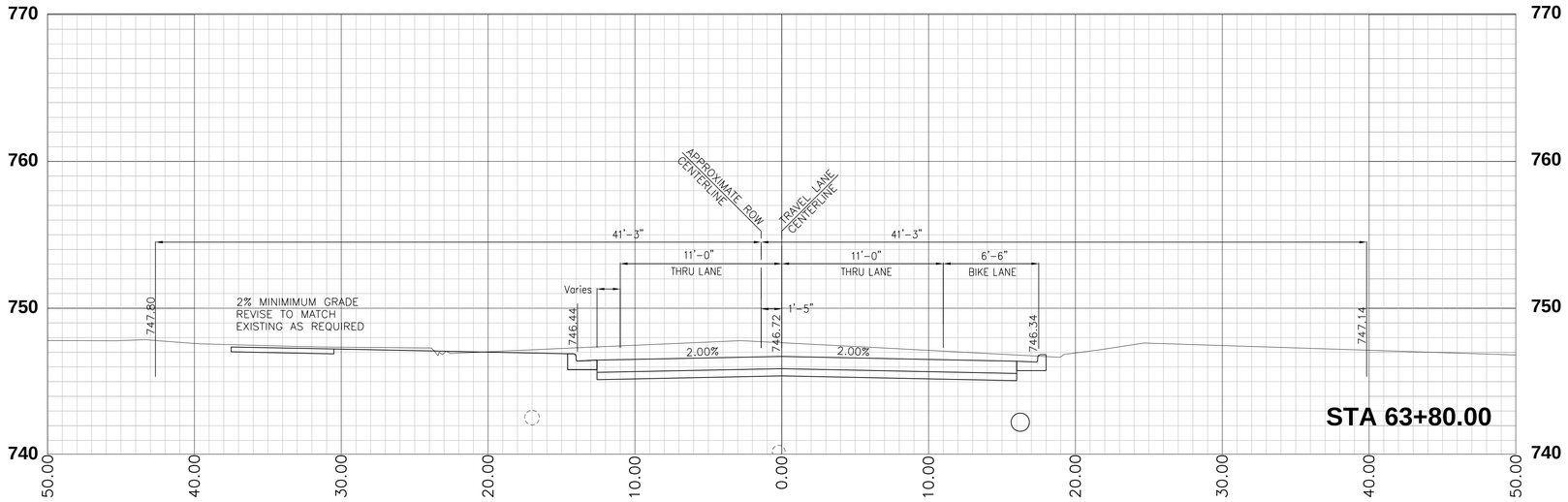
WALNUT STREETSCAPING
CONTRACT B
BLOOMINGTON, INDIANA

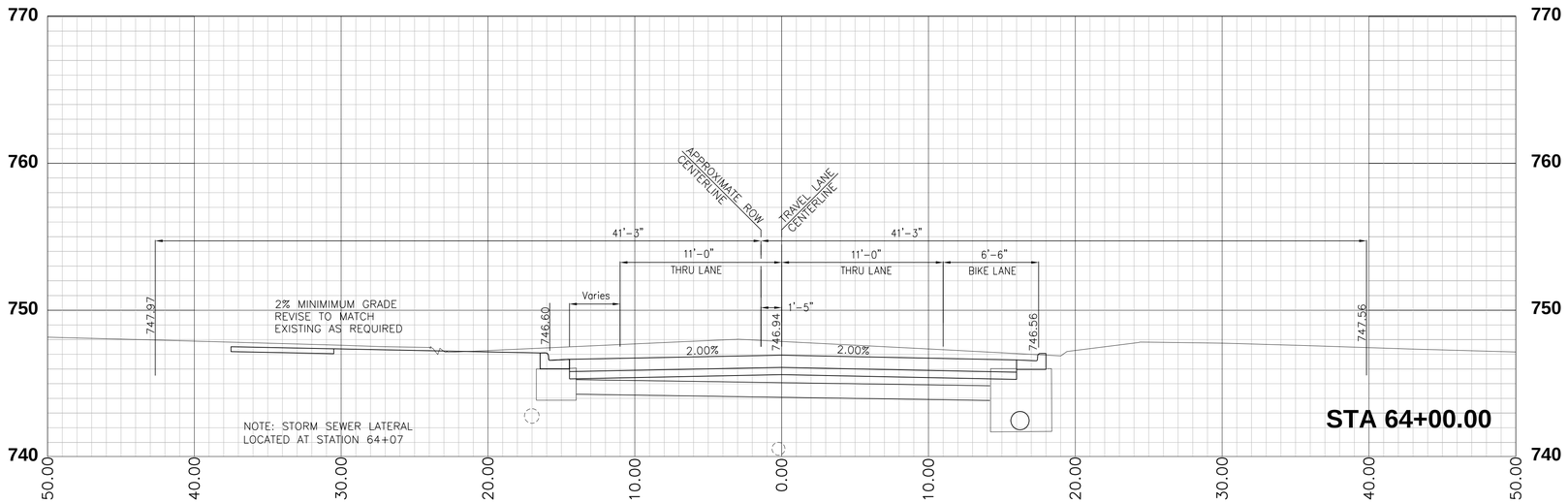
CROSS SECTIONS
ALIGNMENT "A-1"

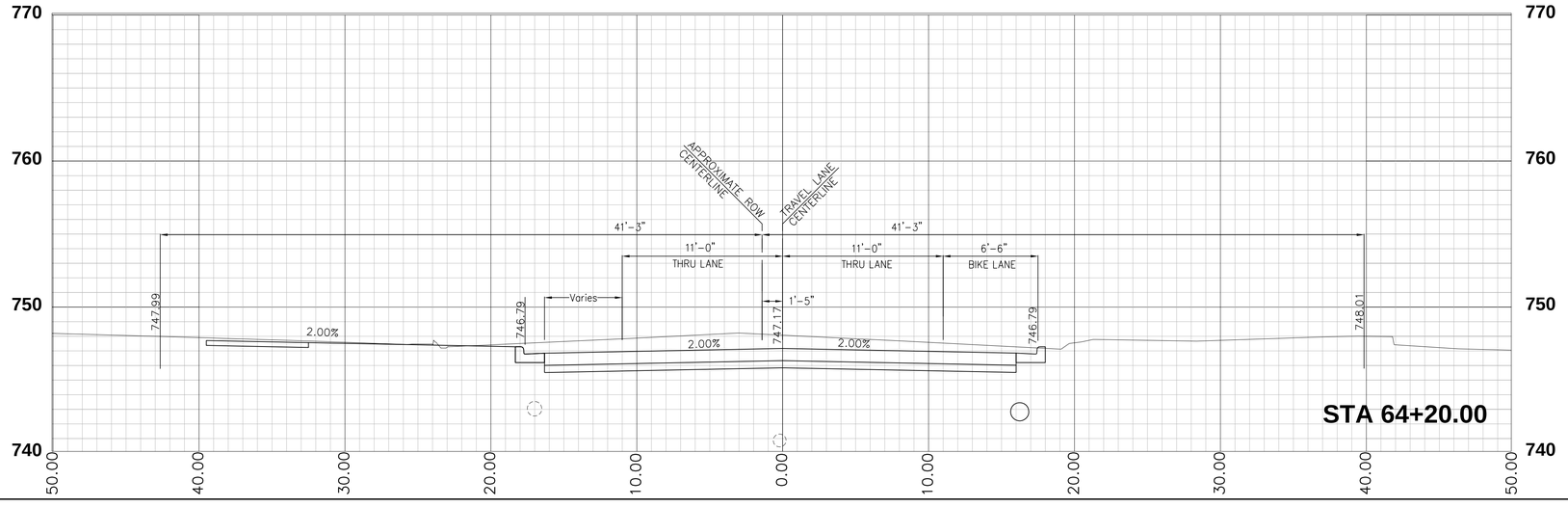
DONOHUE & ASSOCIATES

Sheet No. 26

Drawing No. **CS-7**







Designed By	BDB
Drawn By	BDB
Checked By	TJM
Approved By	PNE
Filename	CROSS SEC 3.DWG
Project No.	11721
Project Date	12/2/11

Date | Checked By | Drawn By | Revision Description | Revision Number

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CITY OF BLOOMINGTON
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CONTRACT B
BLOOMINGTON, INDIANA

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ALIGNMENT "A-1"

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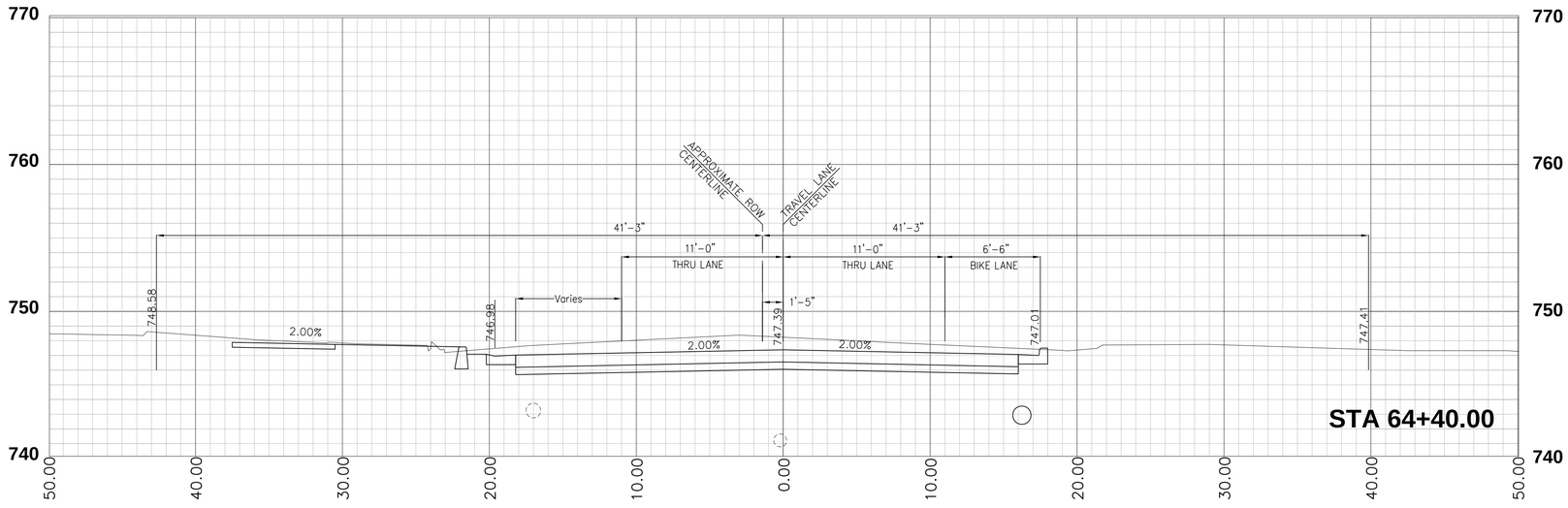
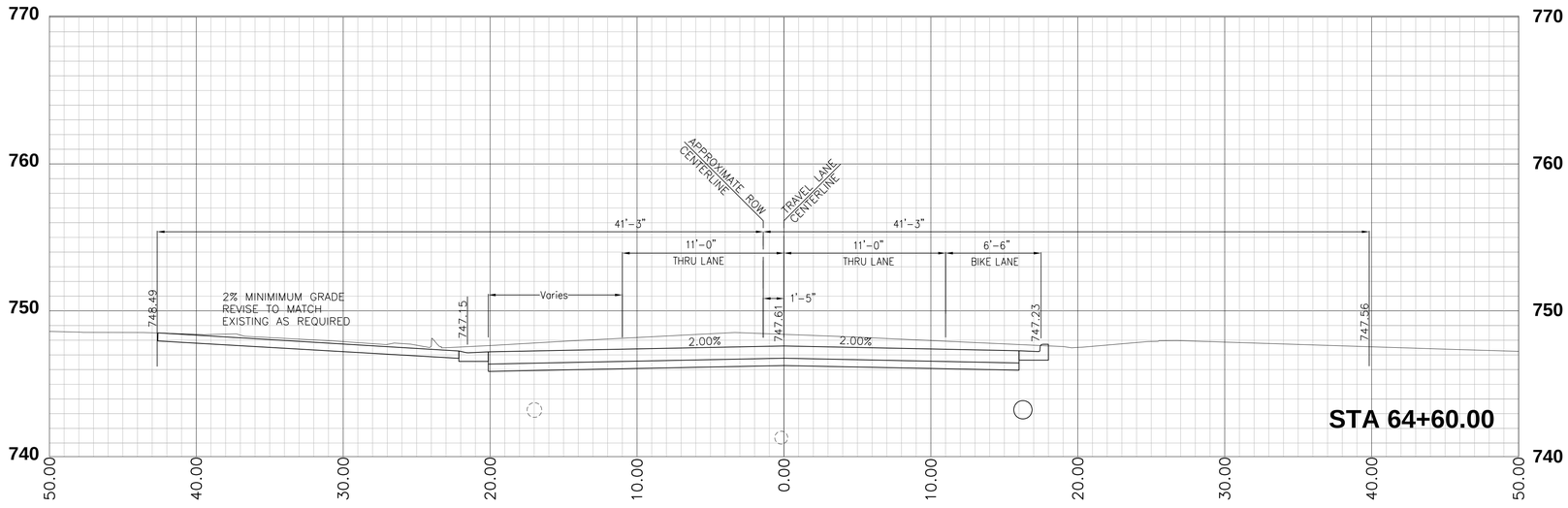
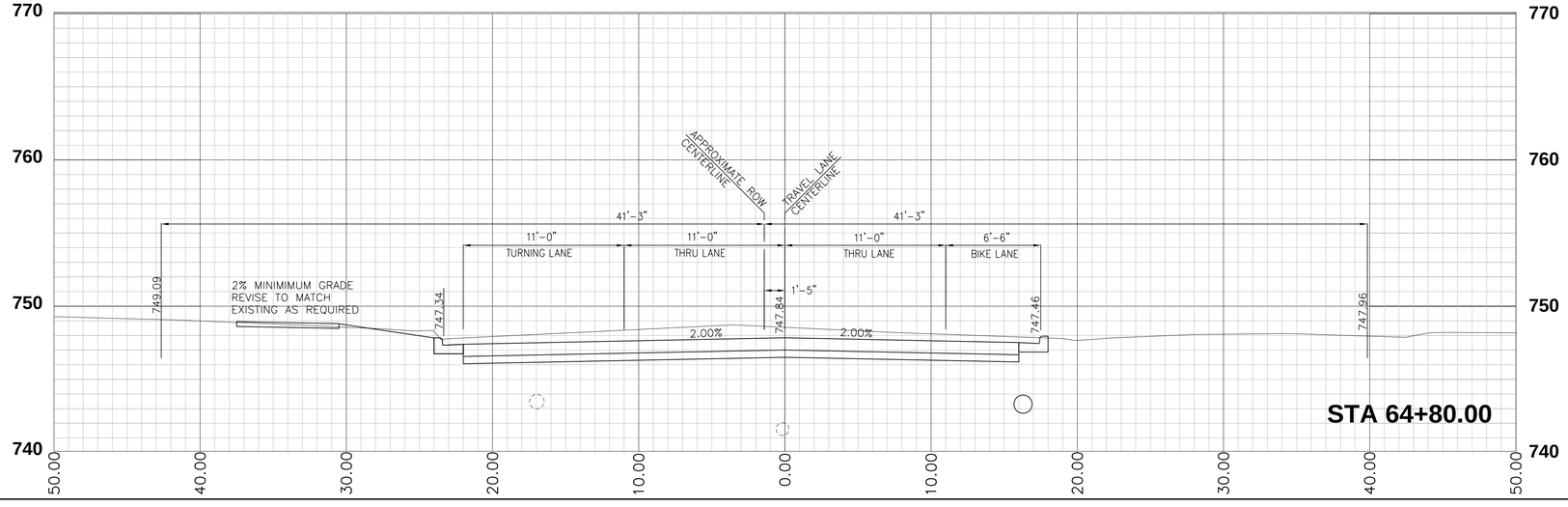
Drawing No. **CS-8**







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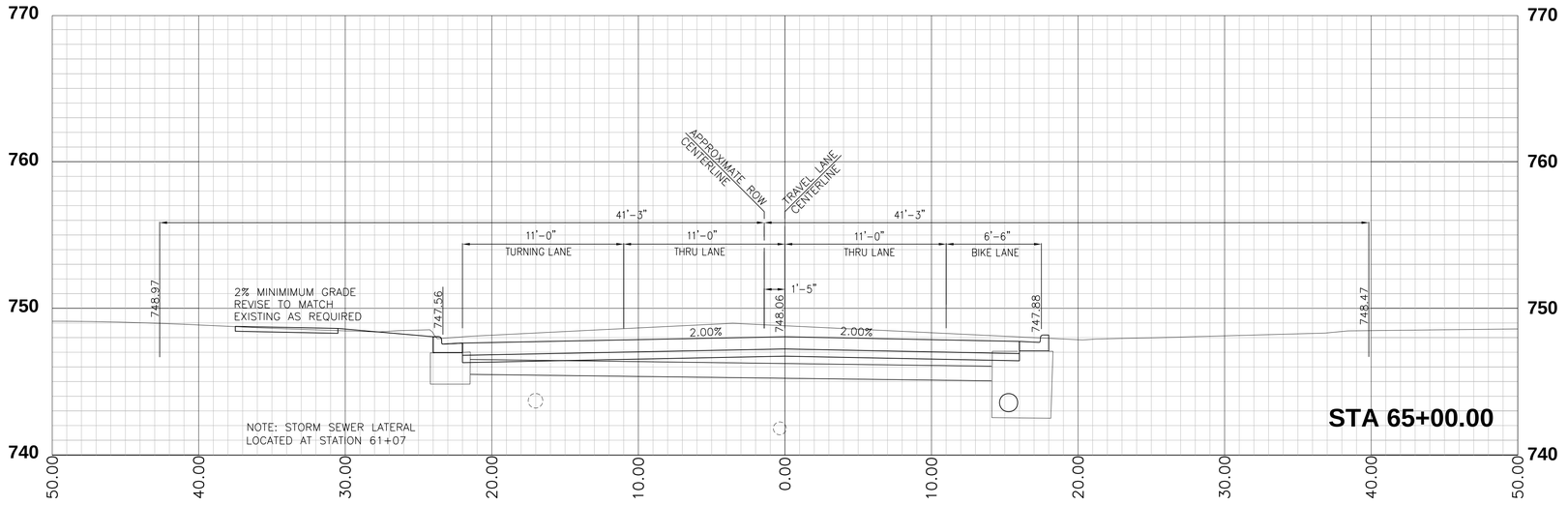
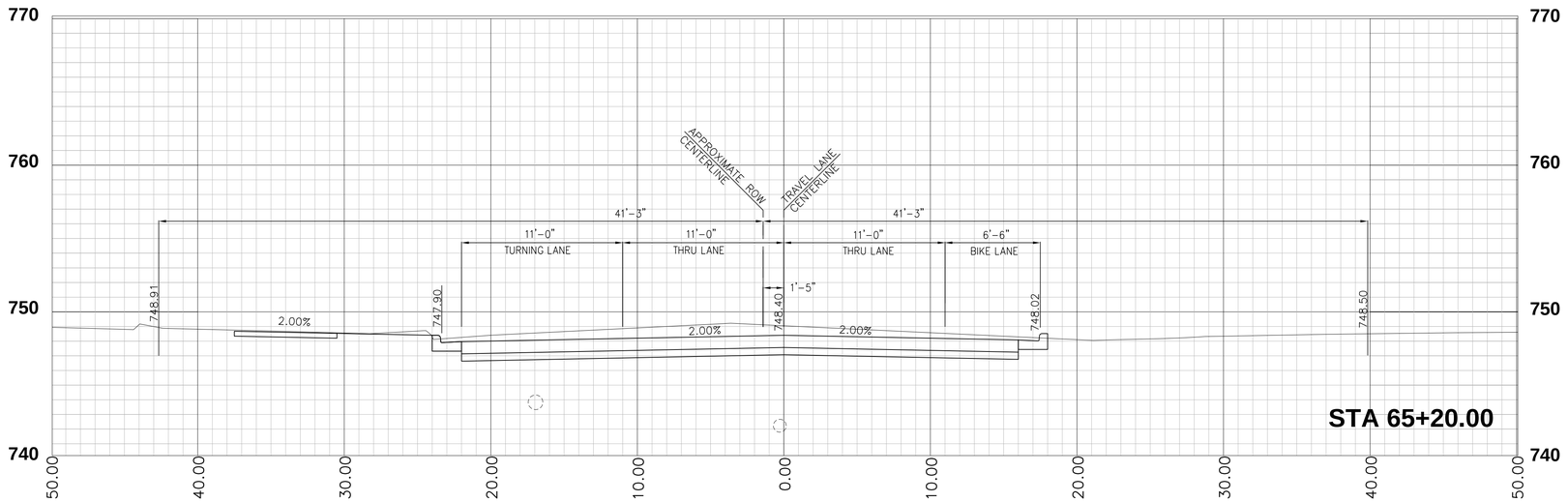
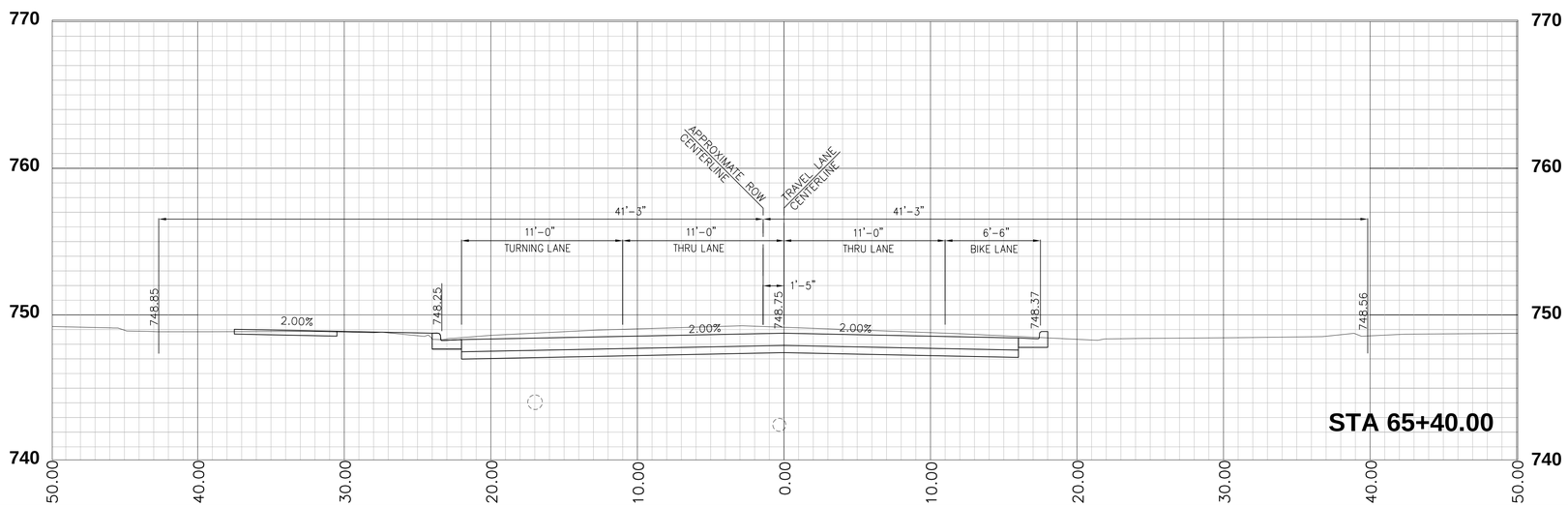
Drawing No. **CS-9**







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Designed By	BDB
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Project No.	11721
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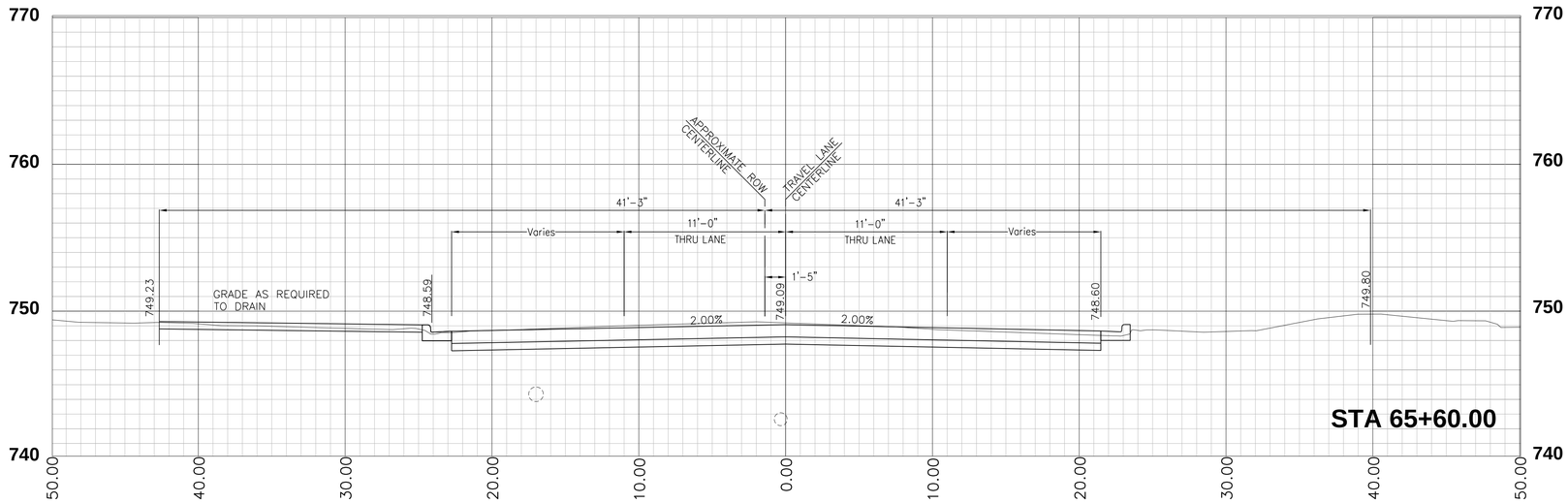
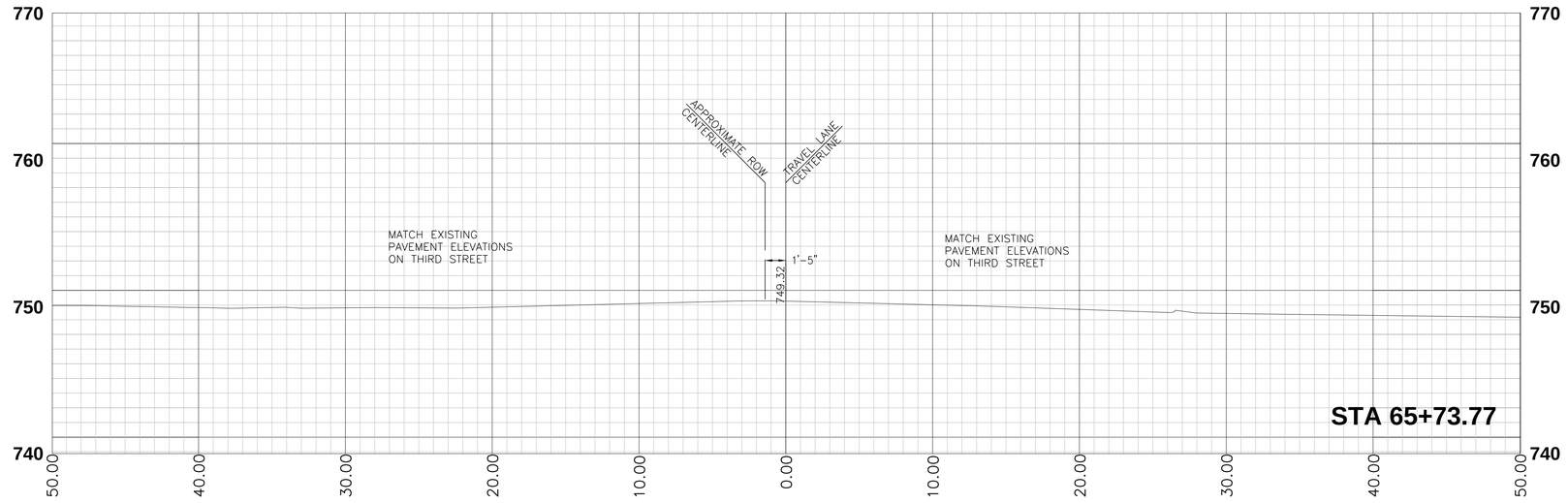
Drawing No. **CS-10**





Revision Number	Revision Description	Date

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Drawing No. **CS-11**