Drain: CLARA KNOTTS	Drain #: 210
Improvement/Arm: CUECE AVE.	ARM
Operator: J. LIVING STON	Date: 3-10-00
Drain Classification: Urban/Rural Y	ear Installed: 2002

GIS Drain Input Checklist

•	Pull Source Documents for Scanning	- fort
•	Digitize & Attribute Tile Drains	00
•	Digitize & Attribute Storm Drains	
•	Digitize & Attribute SSD	· · · · · · · · · · · · · · · · · · ·
•	Digitize & Attribute Open Ditch	
•	Stamp Plans	
	Sum drain lengths & Validate	
•	Enter Improvements into Posse	Just
•	Enter Drain Age into Posse	
•	Sum drain length for Watershed in Posse	
•	Check Database entries for errors	



Kenton C. Ward, Surveyor Phone (317) 776-8495 Fax (317) 776-9628

Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

August 12, 2002

To: Hamilton County Drainage Board

Re: Clara Knotts Drain, College Avenue Arm

Attached are construction plans and profiles for the proposed construction of the College Avenue Arm to the Clara Knotts Drain, along with the petition, drain map, and a drainage-shed map. These plans were prepared by First Group Engineering, Inc. (Project #STP-B878(001)) for the Hamilton County Highway Department for the 106th Street and College Avenue intersection improvements. The proposed arm was petitioned for by the Hamilton County Commissioners on March 25, 2000.

The proposed drain involves constructing a new drain parallel to College Avenue along the west right-of-way. The new drain shall begin at the existing Clara Knotts Drain as reconstructed in 1986. This point is approximately 920 feet west of College Avenue on the north side of I-465. A reinforced concrete pipe (RCP) storm system will begin at this point (Str. 100) and run in an easterly direction to College Avenue, north of I-465 (Str. 103). From this point the RCP storm system will run in a northerly direction on the west side of College Avenue, parallel to College Avenue to the intersection of Arthur Drive and College Avenue (Str. 18). The laterals from this main line that will become part of the Clara Knotts Drain are:

Structure numbers 108 and 109 that blind tap from the main line between structure numbers 107 and 110; structure numbers 11 and 13 that are lateral curb inlet extensions from structure number 12; and structure number 19 that is a lateral curb inlet extension from structure number 18.

Below is a list of the size, type and length of the regulated Drain:

Size	Туре	Length or Quantity
42-inch	RCP	3340-feet
36-inch	RCP	871-feet
30-inch	RCP	59-feet
12-inch	RCP	145-feet

A total of 31.2 acres will be removed from the drainage area of the Home Place Drain and added to the drainage area of the Clara Knotts Drain with the construction of the College Avenue Arm to the Clara Knotts Drain.

The Clara Knotts Drain will have 72 parcels added to it's annual assessment at \$10.00 each. These parcels will be removed from the Home Place Drain. They were assessed \$12.00 each to the Home Place Drain

with the exception of parcel 17-13-11-00-00-008.000 that wasn't assessed to either drain. Thirty-eight parcels were assessed to both drains and will be removed from the Home Place Drain and only assessed to Clara Knotts in the future.

There will be 8.32 acres assessed to the Hamilton County Highway Department for highways. This highway acreage includes area from portions of Arthur Drive, Barmore Avenue, Barbie Lane, 102^{nd} Street, 106^{th} Street from the North R/W and College Avenue from the East R/W. The 8.32 acres will be removed from the Hamilton County Highway Departments Home Place Drain assessment.

Portions of the Home Place Drain which currently cross College Avenue and along the West Side of College Avenue south of 106th Street will be vacated with the construction of the College Avenue Arm to the Clara Knotts Drain. The portion of the Home Place Drain to be vacated is the College Crossing Extension Arm 2 of 6. This drain is located on the west side of College Avenue and will be removed with this proposed College Avenue Arm of the Clara Knotts to structure number 14 which will be set on Arm 6 of the Home Place Drain. This proposed structure number 14 is located on the east side of College Avenue intersection with 105th Street.

The construction of the College Avenue Arm is a continuation of Phase I. Phase I was constructed in 1986. Phase II was approved in 1989 with the exception of section 5 of the report. This new drain is the completion of the main drain of section 5 of the Phase II report with the same drain objectives and principles.

The proposed drain will serve the area west of College Avenue including several tracts now assessed to the Home Place Drain. The following tracts will now be benefited by the Clara Knotts Drain, I recommend that the assessment to these Home Place Drain tracts be removed and added to the Clara Knotts Drain. This change will take affect for the May 2003 billing. However, if any tract is delinquent, I recommend the delinquent bill for the Home Place Drain be collected.

Tract of property owners to be removed from the Home Place Drain and added to the Clara Knotts Drain:

Parcel	Owner	Parcel	Owner
17-13-11-00-00-008.000	Hughes, Kevin & Mary Beth	17-13-11-02-07-005.000	O'Malia Investment Co
17-13-11-02-04-024.000	Odle, Leslie D & Mechong K	17-13-11-02-07-006.000	O'Malia Investment Co
17-13-11-02-04-025.000	Vespa, Frank & Blodwyn	17-13-11-02-07-007.001	Hanna Inc
17-13-11-02-04-027.000	Arnone, Marie L	17-13-11-02-07-007.002	Traynor, Michael P
17-13-11-02-04-028.000	Sheeks, Daniel	17-13-11-02-07-007.003	
17-13-11-02-04-029.000	. •	17-13-11-02-07-007.004	Hanna, Galil A
17-13-11-02-04-030.000	Roysden, Elizabeth A	17-13-11-02-07-007.005	Traynor, Michael P
	Sauer, Vance A & Helen Marie	17-13-11-02-07-007.006	Hanna, Raouf A & Nadia Y
	Johnson, Vangel K Trustee	17-13-11-02-07-007.007	Hanna Inc
17-13-11-02-05-004.000	Severs, Angela; Terry, Chris& Theo Everett	17-13-11-02-07-007.008	Hanna, Raouf & Nadia
17-13-11-02-05-005.000	Crawford, Kim	17-13-11-02-07-007.009	Dorosh, Robert M
17-13-11-02-05-006.000	Wasson, James L & Dana L	17-13-11-02-07-007.010	Peine, Linda L
17-13-11-02-05-007.000	Trietsch, Jon Leon & Elizabeth Ann	17-13-11-02-07-007.011	St Mary & St Mark Coptic Church
17-13-11-02-05-008.000	Johnson, Richard D	17-13-11-02-07-007.012	
17-13-11-02-05-009.000	Guyton, Richard A	17-13-11-02-07-007.013	
17-13-11-02-05-010.000	Kolb, Virginia	17-13-11-02-07-007.014	Hanna Inc
17-13-11-02-05-011.000	Moulton, Richard L & Mary L	17-13-11-02-07-007.015	Dye, Mark A
17-13-11-02-05-012.000	Rhoda, Erwin J & Annabell	17-13-11-02-07-007.016	Verkamp, Ethna
17-13-11-02-05-013.000	Wilson, LarryAllen&Melinda Kay Wilson	17-13-11-02-07-007.017	Hanna Inc
17-13-11-02-05-014.000	fbsen, Jackie H & Sandra	17-13-11-02-07-007.018	Meador, William T & Cynthia G
17-13-11-02-06-001.000	Gilonske, Robert W & Kathleen M	17-13-11-02-07-007.019	

17-13-11-02-06-002.000	Gangstad, Robert E & Mary V	17-13-11-02-07-007.020	Traynor, Michael P
17-13-11-02-06-003.000	Gnatovich, George N & Lola	/17-13-11-02-07-009.000	
17-13-11-02-06-004.000	Tharp, Donald J & Marsha J	17-13-11-02-08-005.000	
17-13-11-02-06-005.000	Tharp, Donald J & Marsha J	17-13-11-02-08-006.000	Goode, Svetla L
17-13-11-02-06-006.000	Tharp, Donald J & Marsha J	17-13-11-02-08-007.000	Goode, Svetla L
17-13-11-02-06-007.000	McNamara, Linda R	17-13-11-02-08-008.000	Goode, Svetla L
17-13-11-02-06-008.000	VanBlaricum, Philip Owen & Janice	17-13-11-02-08-009.000	Rizkalla, Raafat & Maher Rizkalla
17-13-11-02-06-009.000	•		Rizkalla, Raafat & Maher Rizkalla
17-13-11-02-06-010.000	Isbell, Lloyd F II		Graham, Anna M Trustee
17-13-11-02-06-011.000	Taylor, Timothy S & Sharon D	17-13-11-02-08-013.000	
17-13-11-02-06-012.000	Miller, Terri L	17-13-11-02-08-014.000	Paskoff, Susan M
17-13-11-02-07-001.000	Prater, Kimberly K	17-13-11-02-09-004.004	Stiner, Steve & Karen
	Rusticus, Jacob & Judith L		St Vincent New Hope Inc
17-13-11-02-07-003.000	Heimann, Helen L Trustee	17-13-11-02-09-004.007	
17-13-11-02-07-004.000	Green, William David & Jeanene	17-13-11-02-09-004.008	

The cost estimate prepared by First Group Engineering, Inc. for this new drain is \$502,550.00. Listed below is a breakdown of the costs:

	Construction Cost	Inspection Cost	Total Costs
Methodist Hospital	\$195,000.00	\$29,250.00	\$224,250.00
Drainage Board	\$ 40,500.00	\$ 6,075.00	\$ 46,575.00
INDOT Contract	\$201,500.00*	\$30,225.00*	\$231,725.00*
County Highway (20%)	*\$ 40,300.00	*\$ 6,045.00	*\$ 46,345.00
Federal Highway (80%)	*\$161,200.00	*\$24,180.00	*\$185,380.00
Totals	\$437,000.00	\$65,550.00	\$502,550.00

The Hamilton County Highway Department is the agent coordinating the construction of the 106th St & College Avenue intersection improvements and the Clara Knotts Drain, College Avenue Arm. Funds for this project are being received from the Hamilton County Drainage Board (Clara Knotts Drain mantenance fund.), Methodist Hospital, and federal aid. INDOT is the agent for the Federal government and will collect the funds and pay the appropriate entities.

Currently there is \$87,603.96 dollars in the Clara Knotts Drain fund. This drain brings in \$5,600.80 annually in maintenance assessments. Per IC 36-9-27-45.5, it is my opinion that the maintenance fund for the Clara Knotts Drain has a balance in excess of the amount reasonably needed in that fund for maintenance work in the foreseeable future. The cost for the Hamilton County Drainage Board is \$46,345.00 for the upsize of the Clara Knotts Drain for future drainage improvements in the Clara Knotts Drain. This \$46,345.00 will be paid from the Clara Knotts Drain Maintenance Fund.

Methodist Hospital of Indiana, Parcel 16-13-11-04-18-001.000 will be assessed \$224,250 for the portion of the storm sewer system to be constructed across their property.

The Hamilton County Highway Department will be bidding out this contract. Money collected by the Hamilton County Drainage Board will be sent to the County Highway Department. The County Highway Department will be working with INDOT.

Listed below is information on the two drains involved in this project as they were before the change:

Name of the Drain	Acres	Lots	Maintenance Balance	Acre Rate	Lot Rate	Minimum	Roads / acre	Annual Assessment
Home Place Drain # 158	144.54	670	\$1,243.48	\$4.00	\$12.00	\$12.00	\$10.00	\$9,739.50
Clara Knotts Drain #210	286.45	430	\$87,603.96	\$5.00	\$10.00	\$10.00	\$5.00	\$5,600.80

I recommend that the drainage assessment for roads and right-of-ways be changed from \$5.00 per acre to \$10.00 per acre under this proposal.

The proposed construction of this new drain meets the criteria set out in IC 36-9-29-33 for classification as an urban drain. Therefore, this drain is classified as an urban drain.

The Regulated Drain Easement associated with the construction of the Clara Knotts Phase II Regulated Drain along College Avenue will be the greater of the following - fifteen feet per half from the centerline of the drain, per Indiana Drainage code 36-9-27-33, or the width of the road right of way. The portion of the Clara Knotts Phase II Regulated Drain being constructed on the Methodist Hospital of Indiana properties (Parcel #'s 16-13-11-04-18-001.000 and 16-13-11-04-18-001.008) will be constructed within the previously dedicated Clara Knotts Regulated Drainage Easement per the Hamilton County Recorders Office Instrument # 9135273.

Accommend the Board set a hearing for this proposed drain for September 23, 2002.

Kenton C. Ward

Hamilton County Surveyor

KCW/llm

IN THE MATTER OF THE CLARA KNOTTS DRIAN HAMILTON COUNTY DRAINAGE BOARD

Comes now the Board of Commissioners of Hamilton County, who petition the Hamilton County Drainage Board as follows:

- 1. They are the duly elected Board of Commissioners of Hamilton County, Indiana.
- 2. That in that capacity they are responsible for the drainage of public highways.
- 3. That they now desire that a regulated drain be reconstructed in Clay Township which involves College Avenue, Arthur Drive, $103^{\rm rd}$ and $106^{\rm th}$ Street and various areas surrounding the road in the drainage shed.
- 4. The names and address of each owner affected by the proposed public drainage are attached hereto, made a part hereof, and marked Exhibit "A", which area of land involved in the proposed drainage area is located in section(s)11 township 17 range 3 east, Hamilton County, Indiana.
- 5. No other public landowners are located in the area, which would affect improvement.
- 6. That the general route of the proposed drain is a new storm sewer system beginning approximately 900 feet west of College Avenue on the north side of I-465 and running in an easterly direction to College Avenue. From this point the storm sewer system will run in a northerly direction on the west side of College Avenue, parallel to College Avenue to the intersection of 106th Street and College Avenue.
- 7. That in the opinion of the Petitioner, the costs, damages, and expenses of the proposed improvement will be less than the benefits, which will result to the owners of the land to be benefited thereby.
- 8. That in the opinion of Petitioner, the proposed improvement will benefit a public highway in Hamilton County, Indiana.
- 9. That the name of the attorney representing Petitioner in the drainage petition is Michael A. Howard, at 694 Logan Street, Noblesville, Indiana.
- 10. That Petitioners shall pay the cost of notice and all legal costs if the Petition is dismissed.
- 11. Petitioner shall post a bond, if required, to pay the cost of notice and all legal costs in the case the improvement is not established.

Board of Commissioners of

BY:

Steven A. Holt

BY:

Steven C. Dillinger

BY:

Sharon R. Clark

Attest:

Molin Mills

Robin Mills; Auditor of Hamilton County

STATE OF INDIANA)

SS:

Subscribed and sworn to before me, a Notary Public this 25 day of Warch, 241.

Notary Public of Hamilton County

My Commission Expires:

COUNTY OF HAMILTON)

4-16-08

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

Clara Knotts Drain, College Avenue Arm

On this 23rd day of September 2002, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Clara Knotts Drain, College Avenue Arm.

Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessment will be less than the benefits to the landowners and issues this order declaring that this Maintenance Fund be established.

HAMILTON COUNTY DRAINAGE BOARD

President

Member

Member

Typethe Mastrough

This copy is from the Digital Archive of the Hamilton County Surveyor's Office; Noblesville, In 46060

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD NOBLESVILLE, INDIANA

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the Clara Knotts Drain, College Avenue Arm came before the Hamilton County Drainage Board for hearing on September 23, 2002, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

Wherefore, it is ORDERED, that the proposed Reconstruction of the Clara Knotts Drain, College Avenue Arm be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:

HAMILTON COUNTY DRAINAGE BOARD

PRESIDEN'

Member

Member

ATTEST: Secretary Secretary



Kenton C. Ward, CFM Surveyor of Hamilton County Phone (317) 776-8495 Fax (317) 776-9628

Suite 188 One Hamilton County Square Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

August 28, 2008

Re: Clara Knotts Drain: College Avenue Arm

Attached are as-builts, certificate of completion & compliance, and other information for College Avenue Arm. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated August 12, 2002. The report was approved by the Board at the hearing held September 23, 2002. (See Drainage Board Minutes Book 6, Pages 449-453) The changes are as follows:

Structure:	Length:	Size:	Height:	Material:	Up Invert:	Dn. Invert:	Grade:
100-101	160	42		RCP	823.89	823.56	0.2
101-102	354	42		RCP	824.77	824.06	0.2
102-103	464	42		RCP	825.57	824.93	0.2
103-104	432	42		RCP	827.13	825.74	0.3
104-105	112	42		RCP	827.54	827.29	0.4
105-106A	152	42		RCP	827.71	828.32	0.1
106A-107	118	42		RCP	828.95	828.48	0.4
107-110	462	42		RCP	829.58	829.12	0.1
110-111	50	42		RCP	829.79	829.74	0.1
111-113	210	42		RCP	830.17	829.96	0.1
113-116	370	42		RCP	830.7	830.33	0.1
116-117	92	49	35	FBCCP	830.95	830.87	0.1
117-120	278	42		RCP	831.4	831.12	0.1
120-122	239	42		RCP	831.8	831.57	0.1
122-123	210	36		RCP	832.62	832.29	0.1
123-10	249	36		RCP	833.03	832.78	0.1
12-15	170	36		RCP	833.65	833.48	0.1
10-12	126	36		RCP	833.32	833.19	0.1
15-18	59	30		RCP	834.23	834.15	0.15
18-19	65	12		RCP	840.56	840.12	
12-13	39	12		RCP	840.24	839.85	
11-12	21	12		RCP	840	839.85	

109-PIPE	10	12	RCP	834.31	830.52	
108-PIPE	10	12	RCP	833.66	830.39	
106C-106A	9	12	RCP			

RCP Pipe Totals:

	12	154			
	30	59			
	36	755			
	42	3401			

Other Drain:	
FBCCP (49 X	
35)	92
Total:	92

Total:

4369

The length of the drain due to the changes described above is now 4,461 feet.

The easements were outlined in my report to the board as outlined above. No further easements or non-enforcements were deemed necessary.

The project was paid for by County, State, Federal and Methodist Hospital monies. As this project was coordinated by the Hamilton County Highway no sureties were posted.

I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward, CFM Hamilton County Surveyor

KCW/slm

DESIGNATION

9980920

PROJECT

STP-B878(001)

CONTRACT R-26968

INDIANA DEPARTMENT OF TRANSPORTATION

TRAFFIC DATA	106TH STREET	COLLEGE AVENUE
A.A.D.T.(2000)	9,800 V.P.D.	14,350 V.P.D.
A.A.D.T.(2020)	17,450 V.P.D.	21,350 V.P.D.
D.H.V.(2020) PROJECTED	1745 V.P.H.	2135 V.P.H.
DIRECTIONAL DISTRIBUTION	55% E.B. & 45% W.B.	55% N.B. & 45% S.B.
TRUCKS	1% D.H.V.	1% D.H.V.
	2% A.A.D.T.	2% A.A.D.T.
	<u> </u>	
DESIGN DATA		•
DESIGN SPEED	60 km/h	60 km/h
PROJECT DESIGN CRITERIA	RECONSTRUCTION (NON-FREEWAY)	RECONSTRUCTION (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL	MINOR ARTERIAL
RURAL/URBAN	URBAN (BUILT-UP)	URBAN (BUILT-UP)
TERRAÍN	LEVEL	LEVELS
ACCESS CONTROL	NONE	NONE

INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNATION 9980920

SHEETS

PROJECT STP-B878(001)

of 142

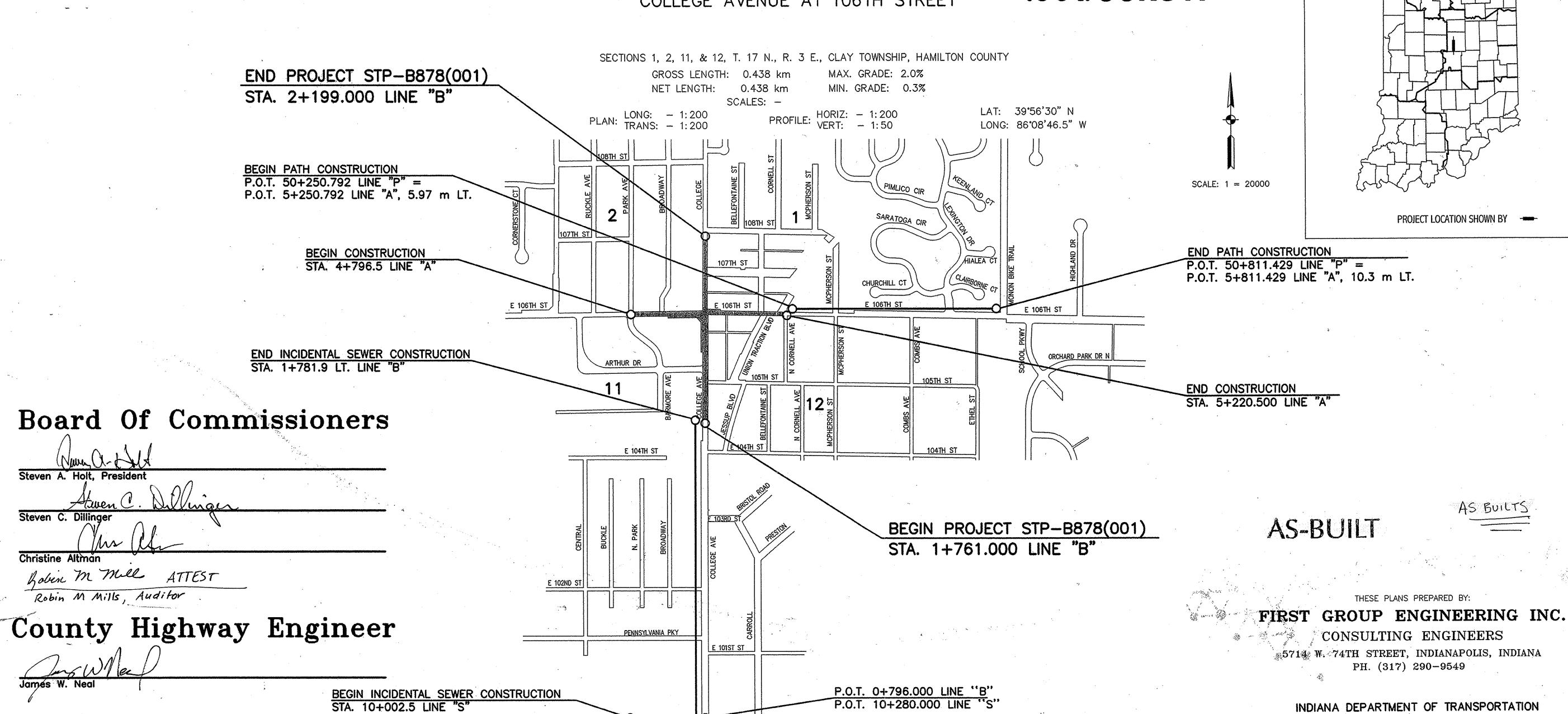
STANDARD SPECIFICATIONS DATED 1999

TO BE USED WITH THESE PLANS

ROAD PLANS

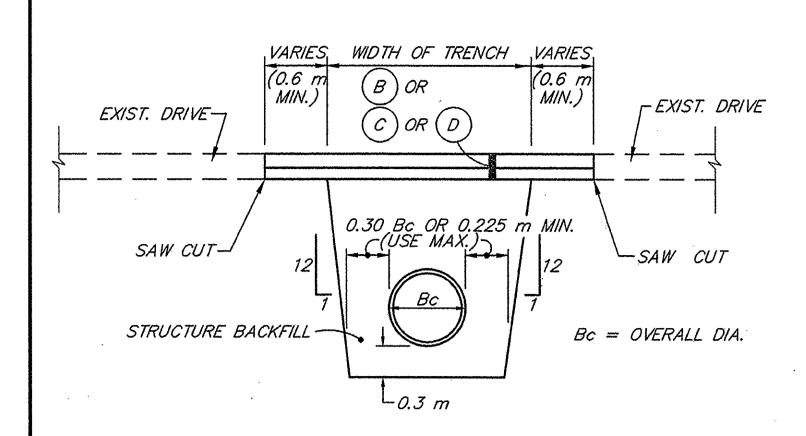
PROJECT NO. STP-B878

INTERSECTION IMPROVEMENT COLLEGE AVENUE AT 106TH STREET (001)R/W(001)CONST.



FIRST GROUP ENGR., INC. (317) 290-9549
PHONE NUMBER

This copy is from the Digital Archive of the Hamilton County Surveyor's Office; Noblesville, In 46060



PIPE TRENCH DETAIL

- NOTE: 1.) PATCH TYPE SHALL BE THE SAME MATERIAL AS EXISTING AND SAME DEPTH AS EXISTING UNLESS DIRECTED OTHERWISE BY ENGINEER.
 - 2.) SEE APPROACH TABLE FOR TOTAL ESTIMATED QUANTITIES OF EACH TYPE OF PATCH.

EARTHWOF	RK TABULATION	TABLE
LINE	CUT (~3)	FILL+25% (m3)
LINE "A" LINE "B" LINE "P"	1855 2779 582 5216 m³	205 286 22.5 513.5 m ³
COMMON EXCAVATION	,	5216 <i>"</i> ³
STRUCTURE BACKFILL		3140 m³

LEGEND

- (B) ASPHALT PAVEMENT FOR DRIVEWAYS:

 90 kg/m² QC/QA-HMA, 2, 70, SURFACE, 9.5 mm ON

 150 kg/m² QC/QA-HMA, 2, 70, INTERMEDIATE, 19.0 mm ON

 200 mm COMPACTED AGGREGATE FOR BASE, 0, SIZE # 53
- C CONCRETE PAVEMENT FOR COMMERCIAL DRIVEWAYS, 200 mm
 ON 150 mm COMPACTED AGGREGATE FOR BASE, O, SIZE # 53
- (D) CONCRETE PAVEMENT FOR DRIVEWAYS, 150 mm
- F) CONCRETE SIDEWALK, 100 mm
- G 825 kg/m² HMA FOR APPROACHES ON 200 mm SUBGRADE TREATMENT, TYPE B
- L FULL DEPTH ASPHALT PAVEMENT:

 90 kg/m² QC/QA-HMA, 2, 70, SURFACE, 9.5 mm ON

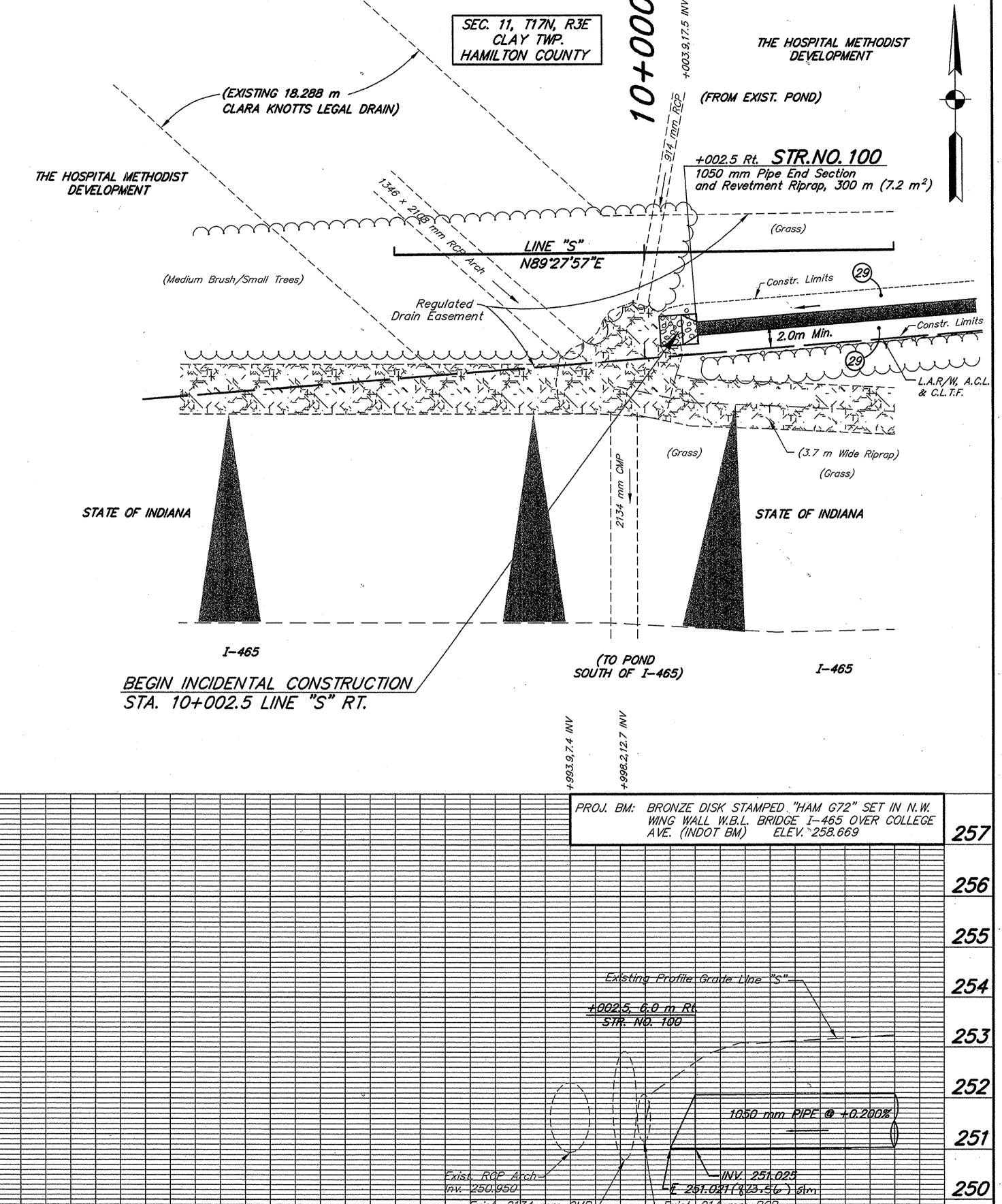
 150 kg/m² QC/QA-HMA, 2, 70, INTERMEDIATE, 19.0 mm ON

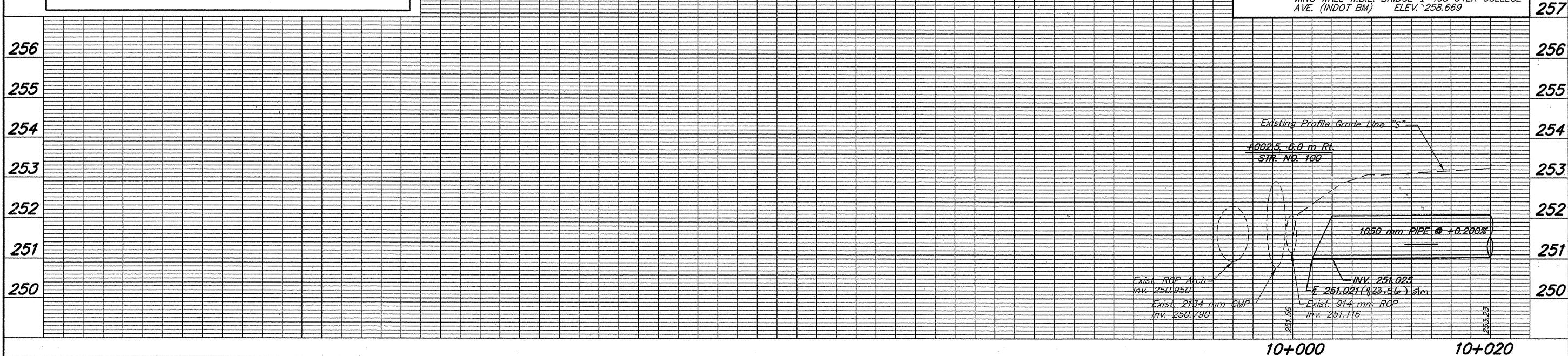
 240 kg/m² QC/QA-HMA, 2, 64, BASE, 19.0 mm ON

 165 kg/m² QC/QA-HMA, 5, 76, INTERMEDIATE, C19.0 mm ON

 180 kg/m² QC/QA-HMA, 2, 64, BASE, 19.0 mm ON

 200 mm SUBGRADE TREATMENT, TYPE B
- M) 75 kg/m² HMA SURFACE 9.5 mm, SHOULDER ON
 105 kg/m² HMA INTERMEDIATE 19.0 mm, SHOULDER ON
 ON 150 mm COMPACTED AGGREGATE FOR BASE, O, SIZE # 53
- (P) ASPHALT MATERIAL FOR PRIME COAT
- R) 90 kg/m²QC/QA-HMA, 2, 70, SURFACE, 9.5 mm AFTER 38 mm ASPHALT SURFACE MILLING
- (Rx) CURB RAMP, TYPE X
- 13) CONCRETE CURB, BARRIER
- (15) CURB & GUTTER, CONCRETE
- (22) CONCRETE CENTER CURB, CORRUGATED
- 26) SODDING (NURSERY)
- (29) SEEDING, TYPE U





No. 19800239
STATE OF MANAGEMENT SS/ONAL ENGINEERING

RECOMMENDED FOR APPROVAL	ESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	
DESIGNED: C.L.H.	DRAWN: M.D.T.	106TH ST. AND COLLEGE AVE.	
CHECKED: L.C.S.	CHECKED: C.L.H:	LINE "S"	

BRIDGE FILE

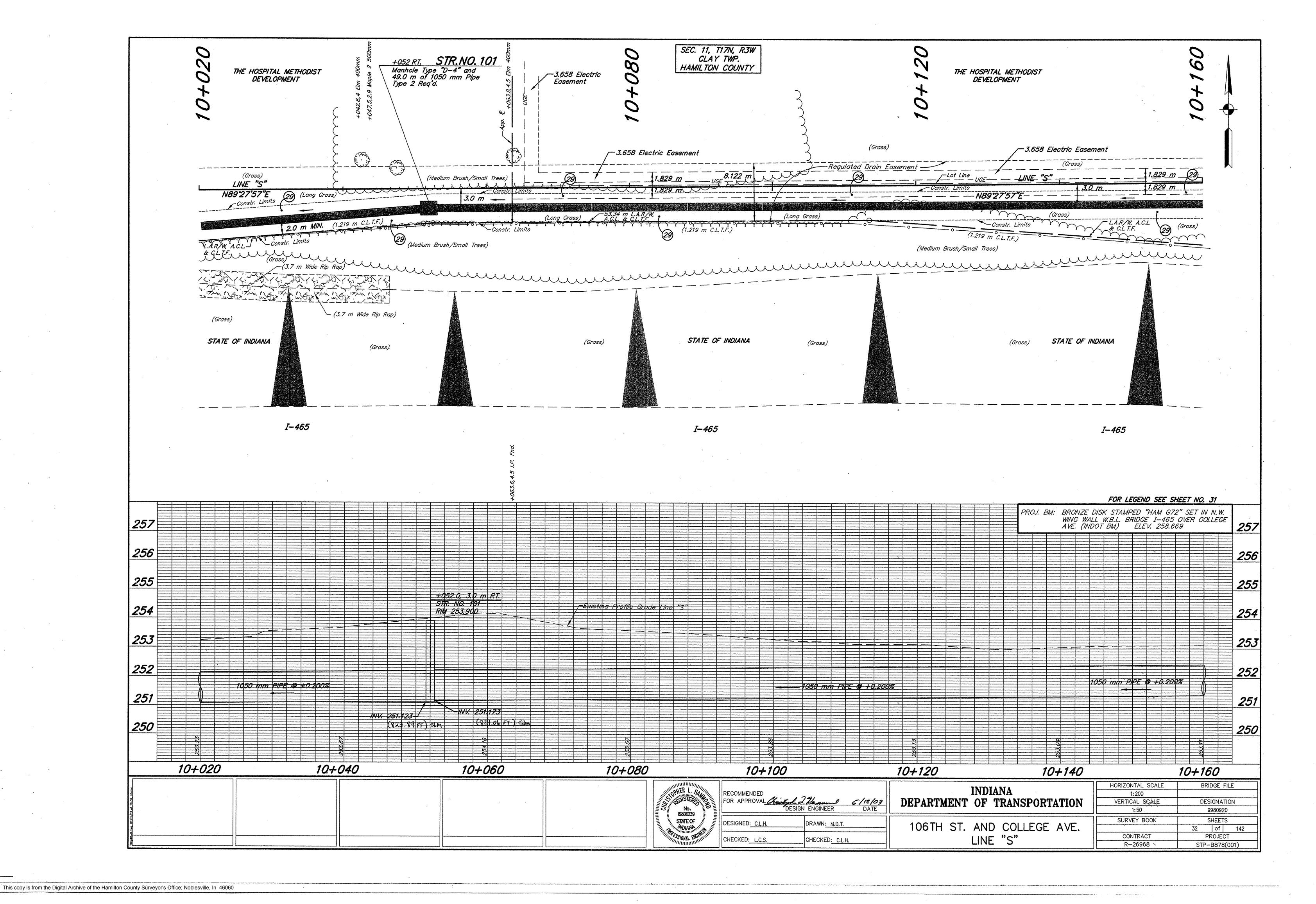
DESIGNATION

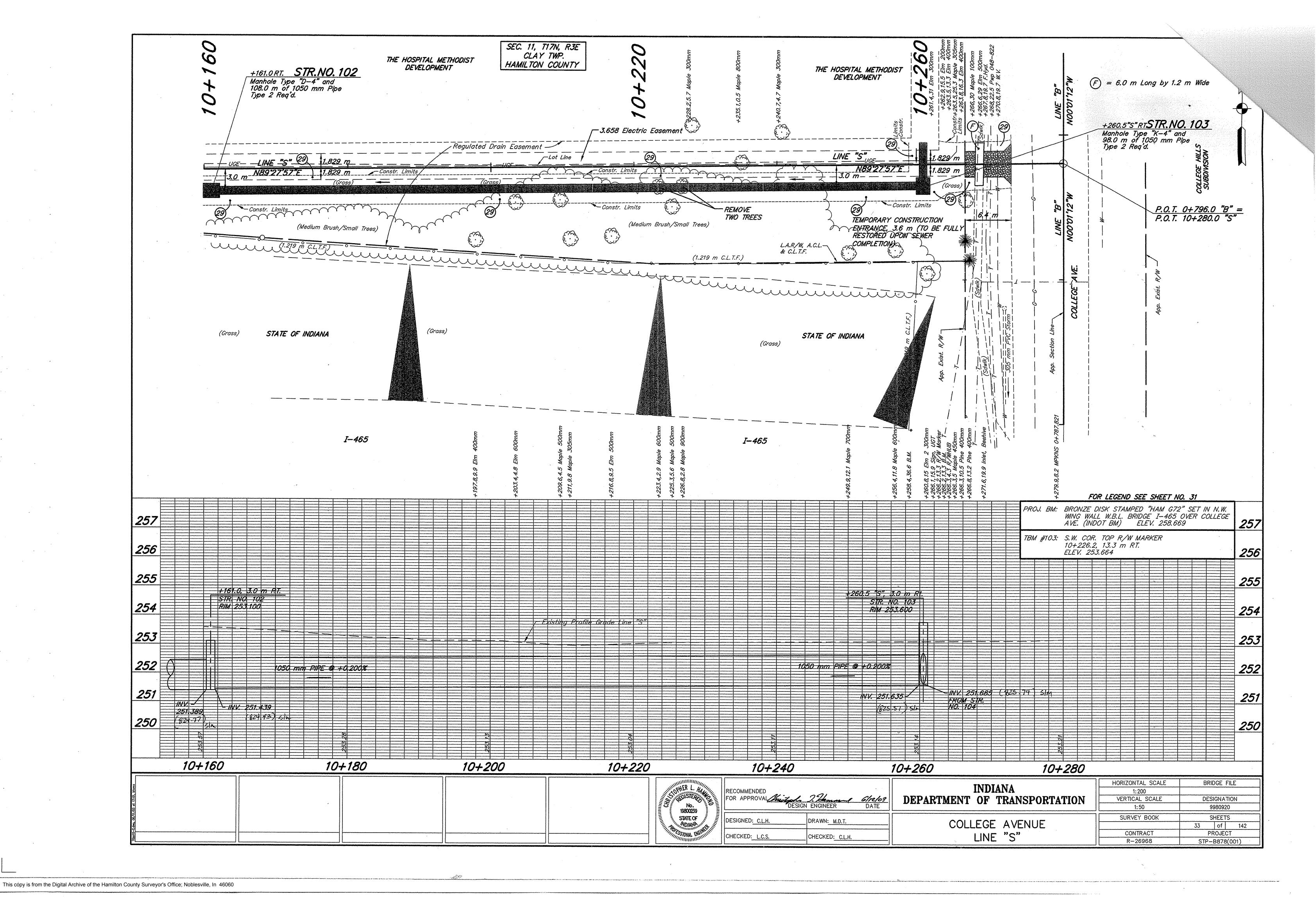
9980920

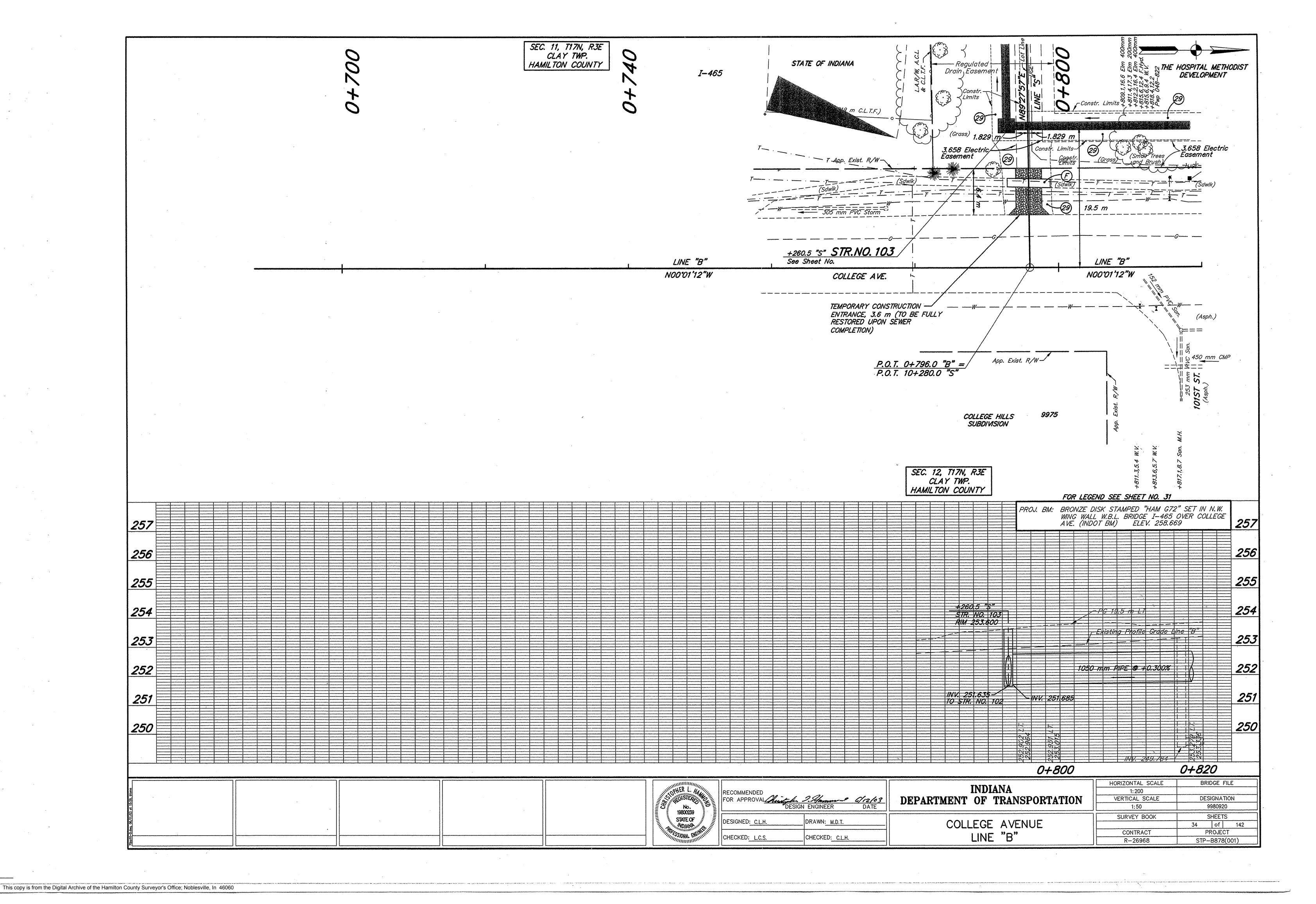
HORIZONTAL SCALE

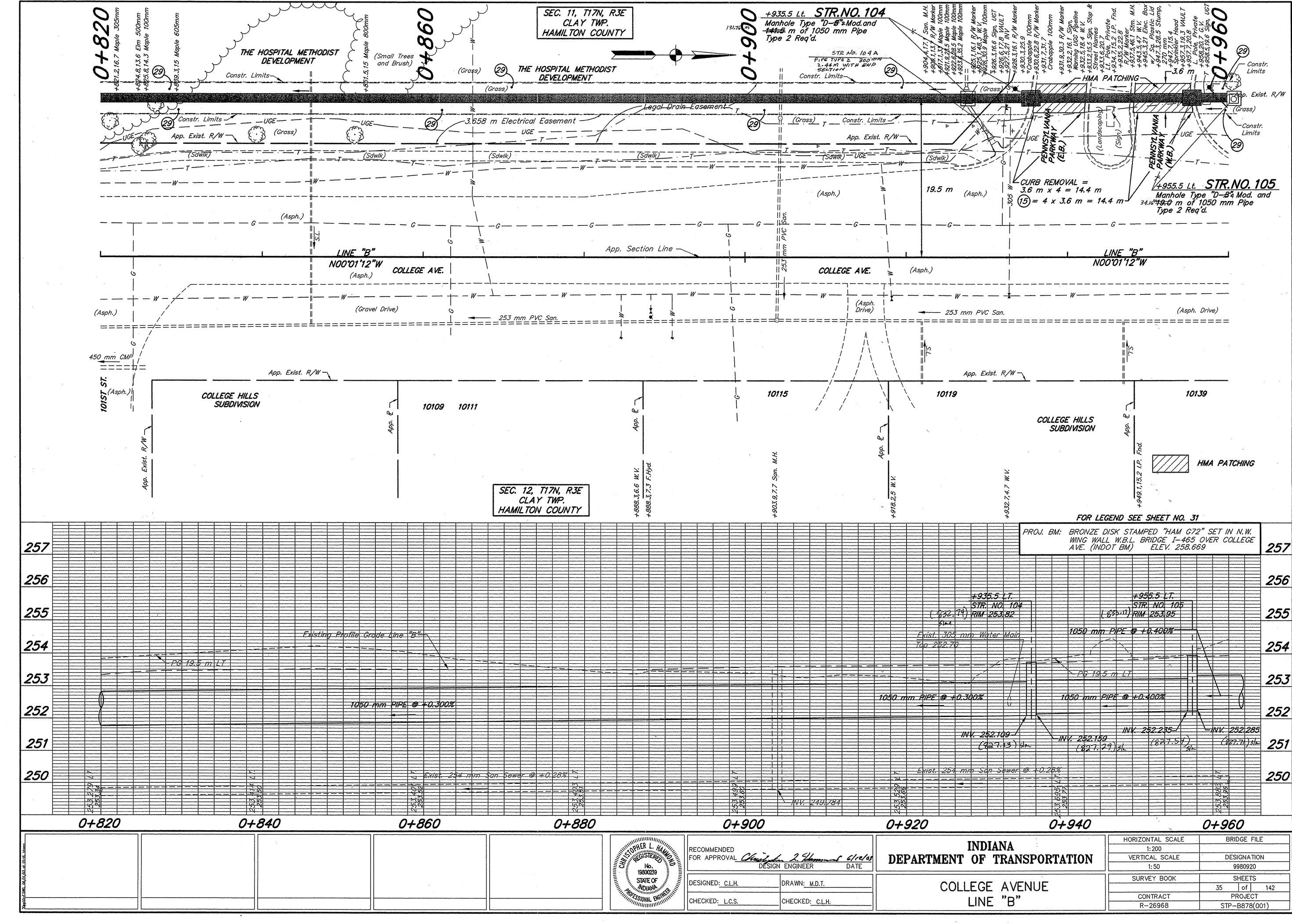
1:200 VERTICAL SCALE

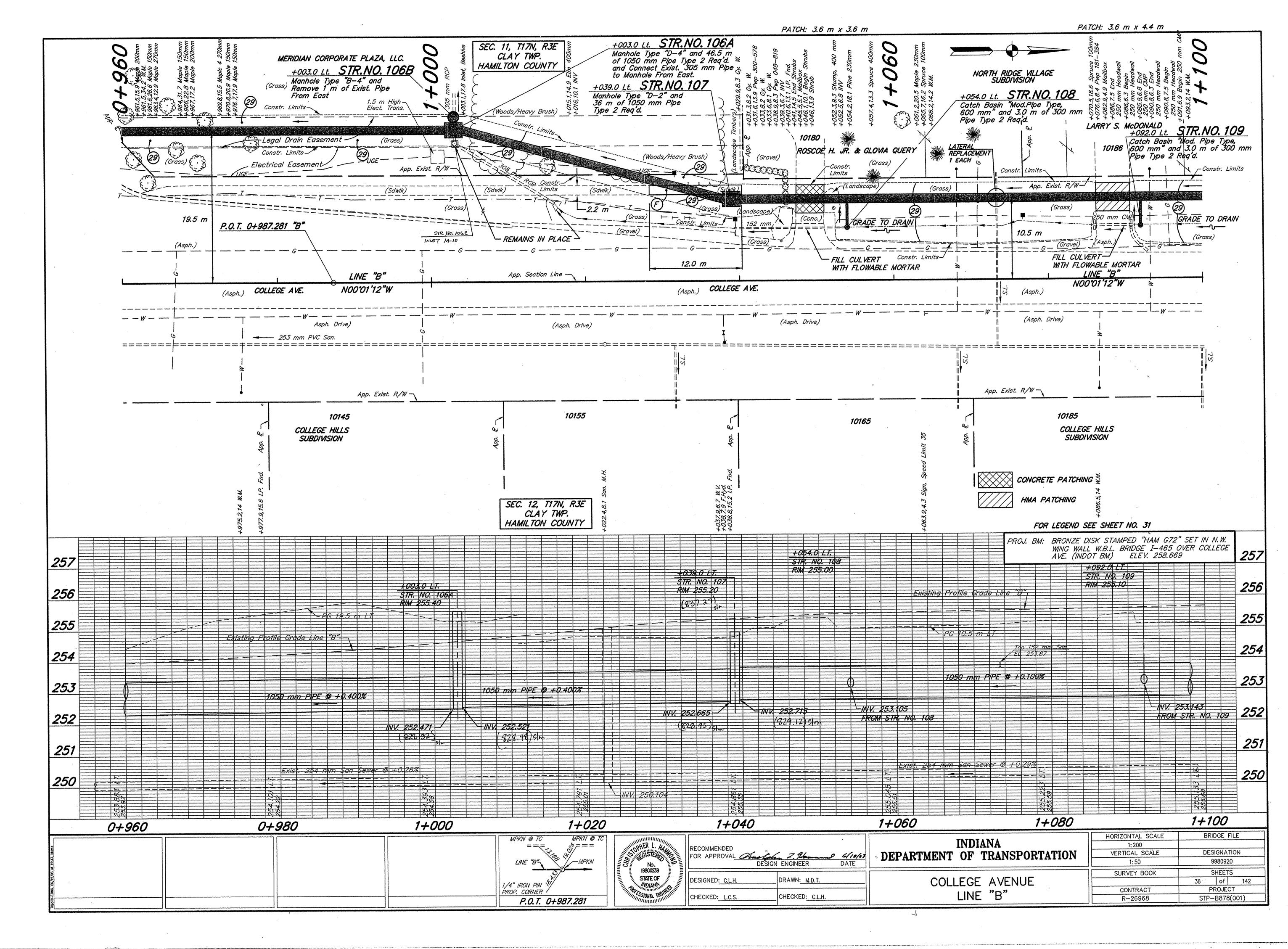
1:50

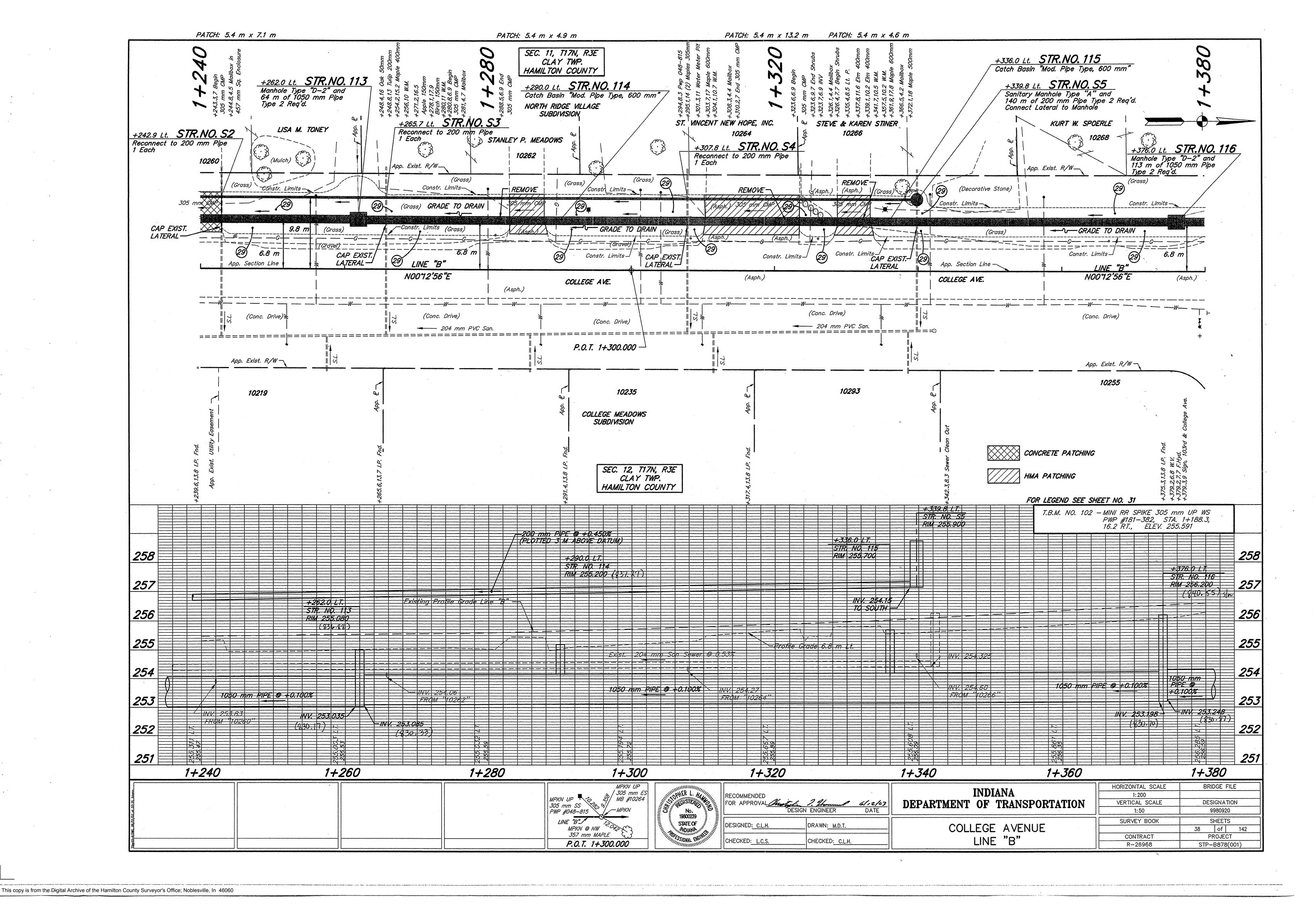


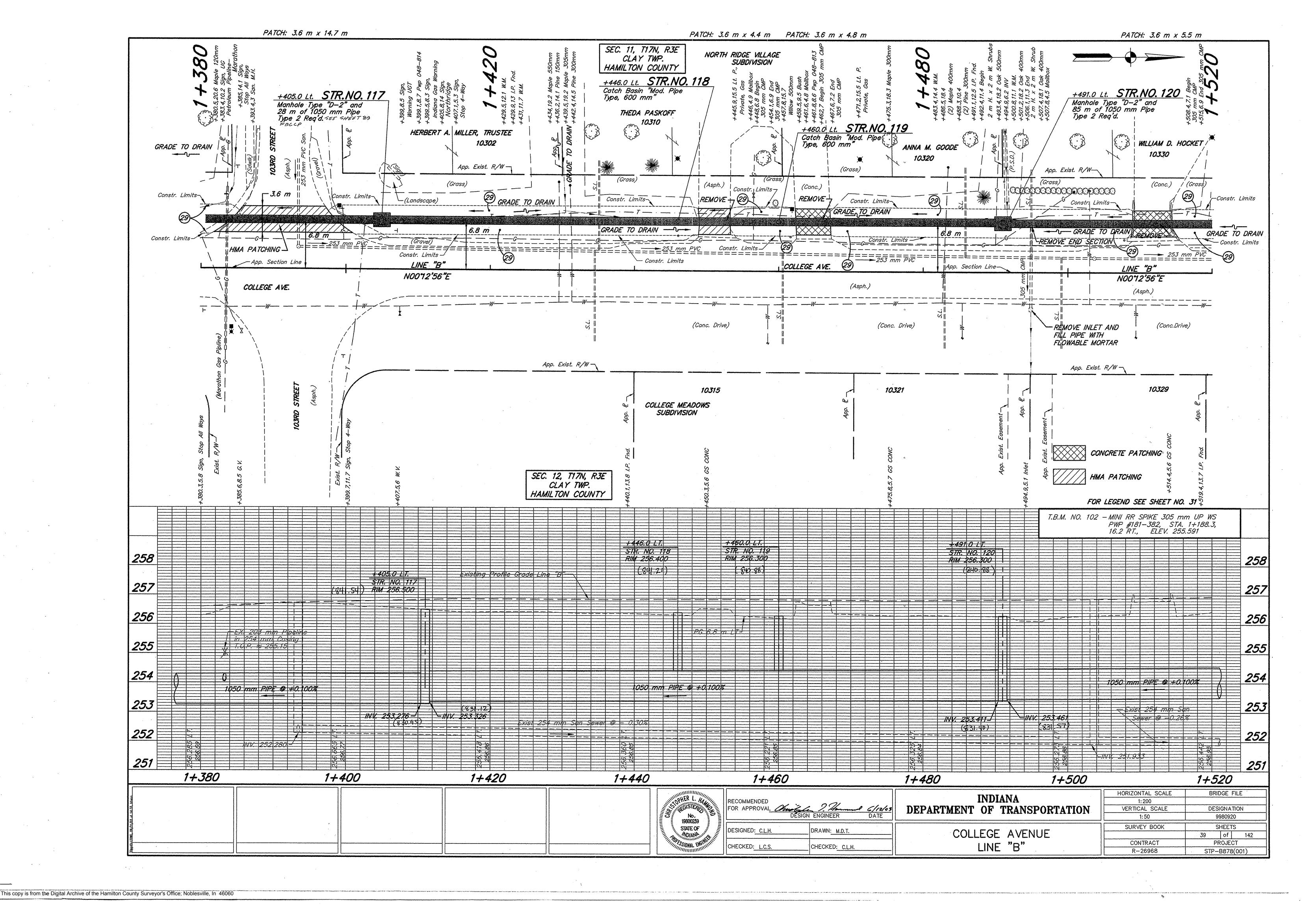


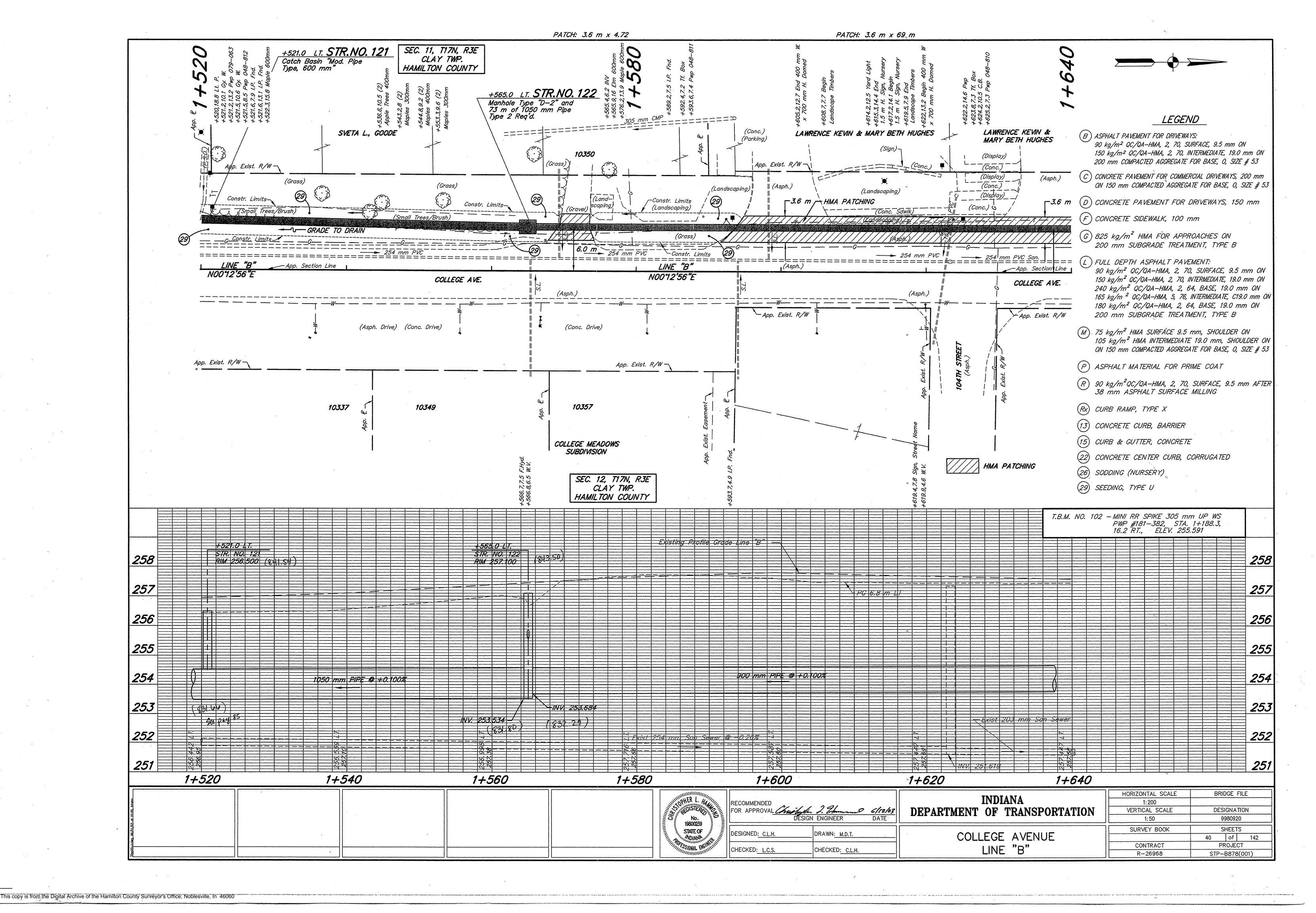


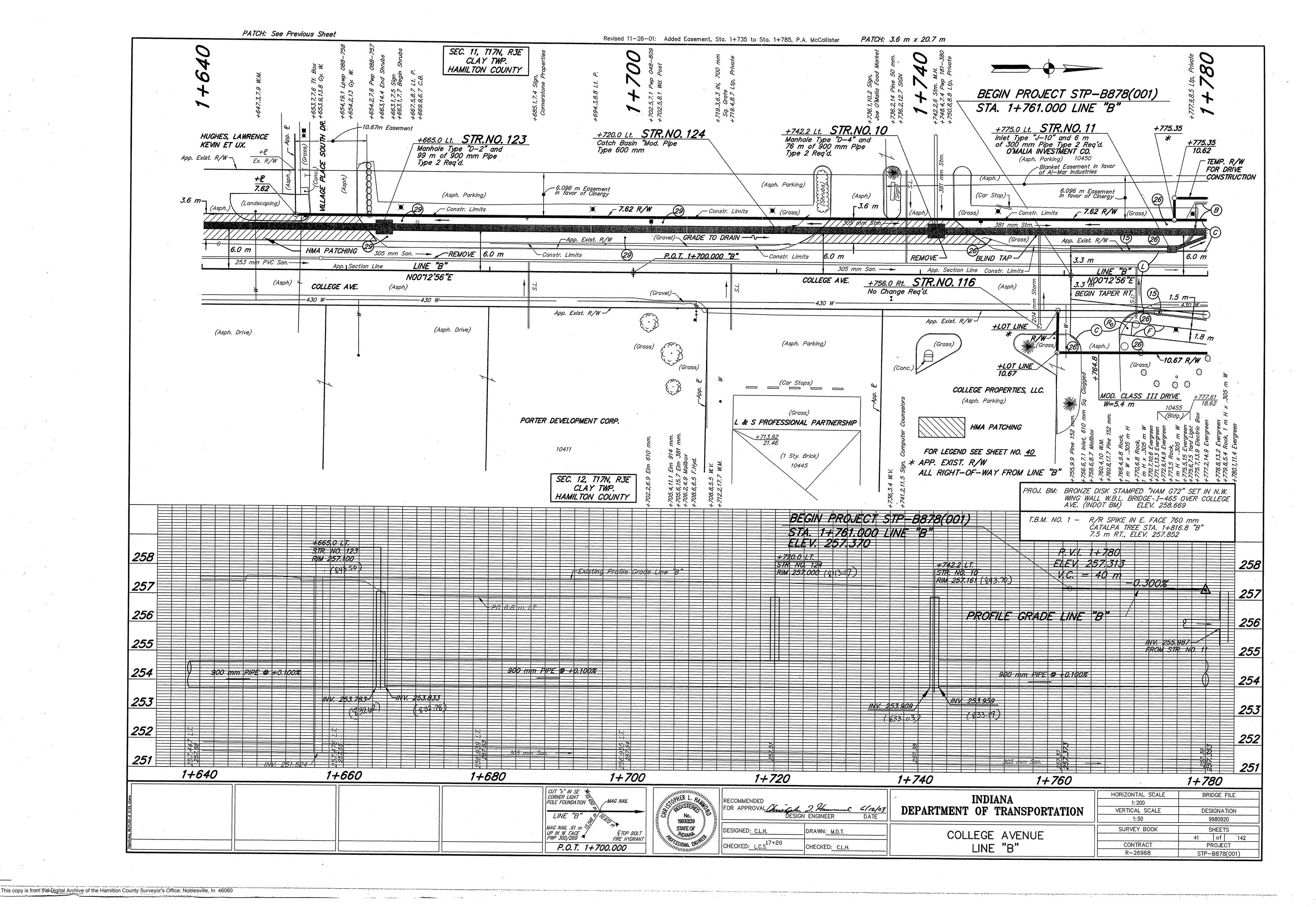


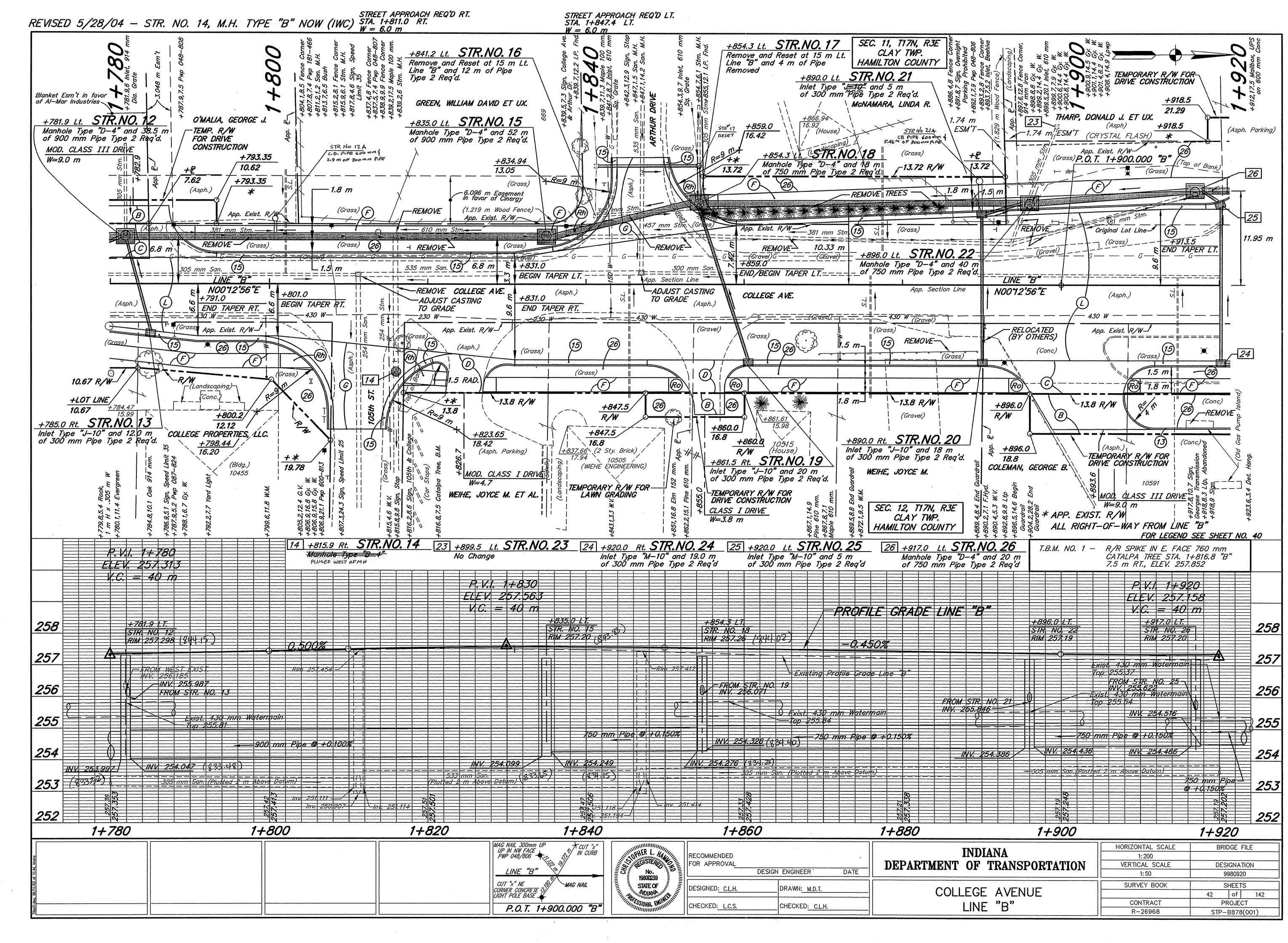












									·		STRUC	TURE NUMBER											·
		101	102	103	104	105	106	107	108	109	110	111	113	116	117	120	122	123	10	11	12	13	15
PIPE TYPE/ SHAPE		2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/
SMOOTH PIPE SIZE		1050	1050	1050	1050	1050	1050	1050	300	300	1050	1050	1050	1050	1050	1050	1050	900	900	300	900	375	9
CORRUGATED PIPE SIZE																							
CLASS		II	II	II	II	II	II	II	II	. II	II	II	II	II	II	II	II	II	II	II	II	III	
CP/ RCHEP (S) D _{0.3} RATIN	G	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	75.	
ON-REINFORCED CONCRETE PIPE, ORRUGATED PE PIPE, TYPE S (S)	CLASS 3 (S)								OK	OK								OK	OK	OK	OK		
ORRUGATED PE PIPE, TYPE S (S) IBBED PE PIPE (S) *	*					,												OK	OK OK	OK	OK OK		
HOOTH WALL DE DIDE (C). (MAYIN	"IN DO 06 00		,									······································						OK	OK OK	OK	OK OK		
MOOTH WALL PE PIPE (S)*/ MAXIN PROFILE WALL PVC PIPE (S)	10M DR 26.00		,				``		·····	***************************************								OK OK	OK OK	OK OK	1		
MOOTH WALL PVC PIPE (S) *					-					,								<u></u>		OK OK	·		
VITRIFIED CLAY PIPE, EXTRA STRE	NGTH (S)				······································				ок	OK								ОК	OK	OK OK	OK		
	CORR. PROFILE	68X13	75X25	68X13	75X25	68X13	75X25	68X13			68X13	75X25	68X13	75X25	(68X13)	75X25	68X13	68X13	68X13		68X13		6
ULLY BIT. PAVED & LINED (S)	THICKNESS	3.51 mm ()	R 3.51 mm C	R 3.51 mm () R 3.51 mm () (LS) or (RIV)	R 3.51 mm O	R 3.51 mm O	R 3.51 mm			3.51 mm O	R 3.51 mm O	R 3.51 mm O	R 3.51 mm C	B 3.51 mm C	R 3.51 mm O	R 3.51 mm	3.51 mm (LS) or (RIV)	3.51 mm		3.51 mm		3.5
NC COATED (C)	CORR. PROFILE THICKNESS	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)			(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)	(LS) or (RIV)		(LS) or (RIV)		(LS)
	CORR. PROFILE																						
NC COATED W/ BPI (C)	THICKNESS																						
LIM COATED TYPE 2 (C)	CORR. PROFILE																						
LUM. COATED TYPE 2 (C)	THICKNESS				·													*					
LUM. COATED TYPE 2 W/	CORR. PROFILE																						
PI (C)	THICKNESS	,	****										·										
OLYMER PRECOATED ALVANIZED (C)	CORR. PROFILE THICKNESS	,																					
	CORR. PROFILE											· · · · · · · · · · · · · · · · · · ·	######################################										
OLYMER PRECOATED GALVANIZED W/ BPI (C)	CORR. PROFILE THICKNESS	,-^							·····														
TBER BONDED BITUMINOUS	CORR. PROFILE																						
OATED (C)	THICKNESS																						
TBER BONDED BITUMINOUS	CORR. PROFILE THICKNESS		,				***************************************											·					
OATED W/ BPI (C) ORRUGATED ALUM. ALLOY	CORR. PROFILE															- 	<u> </u>						
PE (C)	THICKNESS																				95		
ORRUGATED ALUM. ALLOY PIPE	CORR. PROFILE		***************************************												<u> </u>	<u> </u>							
/ BPI (C)	THICKNESS																						
TR. PLATE ALUMINUM	CORR. PROFILE						Ü																
LOY PIPE (C)	THICKNESS																						
TR. PLATE ALUMINUM ALLOY	CORR. PROFILE				***************************************																		
PE W/ CFP (C)	THICKNESS							***************************************				, , , , , , , , , , , , , , , , , , , 			<u> </u>								
STR. PLATE STEEL PIPE (C)	CORR. PROFILE																						
with the without the time (4)	THICKNESS **													······································									
STR. PLATE STEEL PIPE	CORR. PROFILE	·			·		,			·													
/ CFP (C)	THICKNESS **																			<u> </u>			

					•			STF	RUCTURE NUMB	ER			•	•					
		16	18	19	20	21	22	24	25	26	30	31	33	34	35A/B	36	37	38A/B	3
PIPE TYPE/ SHAPE		2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2,
SMOOTH PIPE SIZE		300	750	300	300	300	750	300	300	750	300	300	750	300	300	750	300	300	
CORRUGATED PIPE SIZ	E														à		,		
CLASS		III	II	III	III	III	II	III	III	II	III	II	II	III	III	II	III	III	
RCP/ RCHEP (S) D _{0.3} RAT	NG	75	50	75	75	75	50	75	75	50	75	50	50	75	75	50	75	75	
NON-REINFORCED CONCRETE PIPE	, CLASS 3 (S)		ок				OK			ОК			ОК		,	OK			
CORRUGATED PE PIPE, TYPE S (S			OK				ок	····		OK			OK			OK			
RIBBED PE PIPE (S) *			OK				OK			OK			OK .			OK			
SMOOTH WALL PE PIPE (S)*/ MAX	IMUM DR 26.00		OK				OK			OK			OK			OK			
PROFILE WALL PVC PIPE (S)			OK				OK	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		OK			OK			OK	·		
SMOOTH WALL PVC PIPE (S) *						<u> </u>											<u></u>		
VITRIFIED CLAY PIPE, EXTRA STR		·	OK				OK			OK OK		ļ	OK			OK			
FULLY BIT. PAVED & LINED (S)	CORR. PROFILE		68X13				68X13			68X13			68X13			68X13			
TOLLY BIT. 1 AVED & LINED (0)	THICKNESS		3.51 mm				3.51 mm			3.51 mm			3.51 mm			3.51 mm	***************************************		
INC COATED (C)	CORR. PROFILE	······································	(LS) or (RIV)	******	<u> </u>	·	(LS) or (RIV)			(LS) or (RIV)			(LS) or (RIV)			(LS) or (RIV)			
	THICKNESS					<u> </u>	<u> </u>							·					
ZINC COATED W/ BPI (C)	CORR. PROFILE THICKNESS	····				1											· · · · · · · · · · · · · · · · · · ·		
	CORR. PROFILE											<u> </u>							·····
ALUM. COATED TYPE 2 (C)	THICKNESS																		
LUM. COATED TYPE 2 W/	CORR. PROFILE																		
BPI (C)	THICKNESS														/				
POLYMER PRECOATED GALVANIZED (C)	CORR, PROFILE																		
	THICKNESS																		
OLYMER PRECOATED GALVANIZED W/ BPI (C)	CORR. PROFILE THICKNESS			Video													····		
TIBER BONDED BITUMINOUS	CORR, PROFILE		ļ											 					
OATED (C)	THICKNESS							·		,									
FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE THICKNESS						-									· ·			
CORRUGATED ALUM. ALLOY	CORR. PROFILE				·			·						· · · · · · · · · · · · · · · · · · ·					
IPE (C)	THICKNESS												· · · · · · · · · · · · · · · · · · ·					***************************************	
CORRUGATED ALUM. ALLOY PIPE	CORR. PROFILE	· · · · · · · · · · · · · · · · · · ·												······································		······································	·		
W/ BPI (C)	THICKNESS										· · · · · · · · · · · · · · · · · · ·								
TR. PLATE ALUMINUM	CORR. PROFILE																		
ALLOY PIPE (C)	THICKNESS																		
STR. PLATE ALUMINUM ALLOY	CORR. PROFILE				<u> </u>														
PIPE W/ CFP (C)	THICKNESS											·							
	CORR. PROFILE													······································	·				.,
STR. PLATE STEEL PIPE (C)	THICKNESS **																		
STR. PLATE STEEL PIPE	CORR. PROFILE																		
V/ CFP (C)	THICKNESS **				 							 							

LEGEND

RCP- REINFORCED CONCRETE PIPE RCHEP- REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE PE- POLYETHYLENE DR- DIMENSION RATIO PVC- POLYVINYL CHLORIDE BITUMINOUS CORR- CORRUGATION BPI- BITUMINOUS PAVED INVERT ALUM- ALUMINUM STRUCTURAL CONCRETE FIELD PAVING CIRCULAR PIPE DEFORMED PIPE DEF-SMOOTH PIPE MATERIAL CORRUGATED PIPE MATERIAL ACCEPTABLE FOR USE LOCK SEAM PIPE REQUIRED REFER TO STANDARD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL DIAMETER APPROPRIATE FOR PAY ITEM DIAMETER TABULATED THICKNESS
REFERS TO TOP & SIDE PLATES.
BOTTOM PLATES SHALL BE OF
NEXT GREATER AVAILABE THICKNESS.

RCBC- REINFORCED CONCRETE
BOX COLVERT

(RIV)- RIVETED PIPE REQUIRED

19800239 STATE OF MOLANALITY MOLA	RECOMMENDED FOR APPROVAL
STATE OF THE STATE	DESIGNED: CLH
SSONAL ENGINEERING	CHECKED: LCS

RECOMMENDED FOR APPROVAL Audio DESIGN	2 Hammel I ENGINEER	CINIO3 DATE
DESIGNED: CLH	DRAWN: CLH	

CHECKED: DFS

INDIANA DEPARTMENT OF TRANSPORTATION

COLLEGE	AVE.	AND	106th	ST.	
PIPE	MATER	RIALS	SHEET		

$\neg \cap$	HORIZONTAL SCALE	BR	IDGE FI	LE
	N/A			
	VERTICAL SCALE	DES	SIGNATI	ON
	N/A	9	980920)
	SURVEY BOOK		SHEETS	
		89	of	142
	CONTRACT	F	ROJECT	
	R-26968	STP-	-B878(001)

This copy is from the Digital Archive of the Hamilton County Surveyor's Office; Noblesville, In 46060

					· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·				STRUC'	TURE NUMBER											
	-	41	42	45	46	47	48	49	50	51	52	53	54	55	56	57A/B	58	59	60	61	62	63	64
PIPE TYPE/ SHAPE			2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	2/0
*		2/CIR.						300	300	300	300	300	300	300	600	300	300	450	300	300	450	300	37
SMOOTH PIPE SIZE		300	375	300	375	300	300	300	300	300	300	300	300	000									
CORRUGATED PIPE SIZE								*	**	7.7	Ť T	TT	II	III		II	III	II	III	III	II	II	
RCP/ RCHEP (S) CLASS		III	II	III	II	III	III	II	II	II	11	11				60	75	50	75	75	50	60	
D0.3 KAIII4		75	50	75	50	75	75	60	60	75	50	50	60	75			75	OK	 		OK	OK	
NON-REINFORCED CONCRETE PIPE, CORRUGATED PE PIPE, TYPE S (S)	LASS 3 (S)							OK	OK		OK OK	OK OK	OK		OK OK	OK OK		OK OK			OK		
RIBBED PE PIPE (S) *	*										UK	<u> </u>			OK OK			OK			OK		
SMOOTH WALL DE PIPE (S)*/ MAXIM	IM DR 26.00										OK	OK			OK			OK			OK		
SMOOTH WALL PE PIPE (S)*/ MAXIM PROFILE WALL PVC PIPE (S)	21(22,000										OK	OK			OK			OK .			OK		ļ
SMOOTH WALL PVC PIPE (S) *											OK	OK			OK			OK			OK OK	OK	
VITRIFIED CLAY PIPE, EXTRA STREN								OK	OK		OK	ок	<u> </u>		OK	OK		OK OK					
THE V DIT DAVEN & INCO /CI	CORR. PROFILE																				<u> </u>		
	THICKNESS											· · · · · · · · · · · · · · · · · · ·											
INC COATED (C)	CORR. PROFILE THICKNESS																						
	CORR. PROFILE																						
	THICKNESS																	 			`		
ALUM COATED TYPE 2 (C)	CORR. PROFILE														4								
	THICKNESS																						
	CORR. PROFILE	* .																					
	THICKNESS		······································		·····																		
POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE THICKNESS														***************************************								
POLYMER PRECOATED	CORR. PROFILE							`															
POLYMER PRECOATED GALVANIZED W/ BPI (C)	THICKNESS			,																			
FIBER BONDED BITUMINOUS	CORR. PROFILE																						
COATED (C)	THICKNESS													<u> </u>									
FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE THICKNESS																						
CORRUGATED ALUM. ALLOY	CORR. PROFILE																						_
PIPE (C)	THICKNESS																						
CORRUGATED ALUM. ALLOY PIPE	CORR. PROFILE																						-
W/ BPI (C)	THICKNESS			<u> </u>		•								<u> </u>									
STR. PLATE ALUMINUM	CORR. PROFILE																						
ALLOY PIPE (C)	THICKNESS																					,	
STR. PLATE ALUMINUM ALLOY	CORR. PROFILE				ļ																		
PIPE W/ CFP (C)	THICKNESS	······································																					
STR. PLATE STEEL PIPE (C)	CORR. PROFILE																,						
	THICKNESS **																						
STR. PLATE STEEL PIPE	CORR. PROFILE											<u> </u>		<u> </u>									
W/ CFP (C)	THICKNESS **									}	1	1	1	1	1	1	I	1	1				

								CT	RUCTURE NUMB	EB								
		7					70		T		1 00							
		65	66	69	70	71	72	73	74	81	82							
PIPE TYPE/ S	HAPE	3/CIR.	2/CIR.	2/CIR.	2/CIR.	2/CIR.	1/CIR.	3/CIR.	3/CIR.	3/CIR.	3/CIR.							
SMOOTH PIPE	SIZE	300	300	300	300	300	450	300	100	300	300							
CORRUGATED P	PE SIZE							300	100	300	300							
CLASS		II	III	II .	II	III	II	III	II	III	III							
RCP/RCHEP (S) D _{0.3}	RATING	60	75	50	60	75	50	75	50	75	75 -	4.						
NON-REINFORCED CONCRET		OK		OK	OK													
CORRUGATED PE PIPE, TYP				OK														
RIBBED PE PIPE (S) *																		
SMOOTH WALL PE PIPE (S)	/ MAXIMUM DR 26.00			OK														
PROFILE WALL PVC PIPE	(S)		***************************************	OK			·											
SMOOTH WALL PVC PIPE (S) *	,		OK														
VITRIFIED CLAY PIPE, EXT		ОК		OK	OK													
	CORR PROFILE															·		
FULLY BIT. PAVED & LINEI	(S) THICKNESS											·						
	CORR. PROFILE																	
ZINC COATED (C)	THICKNESS																	
	CORR. PROFILE		· · · · · · · · · · · · · · · · · · ·				68X13											
ZINC COATED W/ BPI (C)	THICKNESS						2.77 mm					, , , , , , , , , , , , , , , , , , , ,						
COOD DOCEIL		3					(LS) OR (RIV))					<u> </u>					
LUM. COATED TYPE 2 (C) THICKNESS																		
ALUM COATED TYPE 2 W/	CORR. PROFILE						68X13											
ALUM. COATED TYPE 2 W/ BPI (C)	THICKNESS						0.63 mm											
DOLYMED DRECOVIED	CORR. PROFILE				***************************************		(LS) OR (RIV)											
POLYMER PRECOATED GALVANIZED (C)	THICKNESS			<u> </u>														
POLYMER PRECOATED							68X13											
GALVANIZED W/ BPL (C)	THICKNESS						0.63 mm											
POLYMER PRECOATED GALVANIZED W/ BPI (C) FIBER BONDED BITUMINOUS	CORR. PROFILE						(LS) OR (RIV)			,							
COATED (C)	THICKNESS							/										
FIRER RONDED BITHMINGUS	CORR PROFILE					,	68X13											
FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE THICKNESS	<u> </u>					1.63 mm											
CORRUGATED ALUM. ALLOY	CORR. PROFILE						(LS) OR (RIV)										
PIPE (C)	THICKNESS	· · · · · · · · · · · · · · · · · · ·																
CORRUGATED ALUM. ALLOY							68X13											
W/ BPI (C)	THICKNESS						1.52 mm											
STR. PLATE ALUMINUM	CORR. PROFILE						(LS) OR (RIV)							,			
ALLOY PIPE (C)	THICKNESS									``					,			
STR. PLATE ALUMINUM ALLO		•			·		}							į		,		
PIPE W/ CFP (C)	THICKNESS		1										,					
111 47 011 (0)		ļ		<u> </u>														
STR. PLATE STEEL PIPE (C	STR. PLATE STEEL PIPE (C) CORR. PROFILE																	
	THICKNESS **																	
STR. PLATE STEEL PIPE	CORR. PROFILE		<u>.</u>										<u> </u>					
W/ CFP (C)	THICKNESS **			T		, ,			<u> </u>						•	1	1	1

LEGEND

RCP- REINFORCED CONCRETE PIPE RCHEP- REINFORCED CONCRETE
HORIZONTAL ELLIPTICAL PIPE
PE- POLYETHYLENE PVC- POLYVINYL CHLORIDE BITUMINOUS CORR— CORRUGATION BITUMINOUS PAVED INVERT ALUM- ALUMINUM STR- STRUCTURAL CONCRETE FIELD PAVING CIRCULAR PIPE DEF- DEFORMED PIPE SMOOTH PIPE MATERIAL CORRUGATED PIPE MATERIAL ACCEPTABLE FOR USE LOCK SEAM PIPE REQUIRED REFER TO STANDARD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL DIAMETER APPROPRIATE FOR PAY ITEM DIAMETER TABULATED THICKNESS
REFERS TO TOP & SIDE PLATES.
BOTTOM PLATES SHALL BE OF
NEXT GREATER AVAILABE THICKNESS.

RCBC- REINFORCED CONCRETE BOX COLVERT (RIV)- RIVETED PIPE REQUIRED

HORIZONTAL SCALE

BRIDGE FILE



RECOMMENDED FOR APPROVAL	istales 2. Hammer	6/12/03
	DESIGN ENGINEER	DATE
DESIGNED: CLH	DRAWN: CLH	

INDIANA								
DEPARTMENT	OF	TRANSPORTATION						

RTMENT OF TRANSPORTATION	VERTICAL SCALE N/A	DESIGNATION 9980920		
OLLEGE AVE. AND 106th ST.	SURVEY BOOK	SHEETS 90 of 142		
PIPE MATERIAL SHEET	CONTRACT	PROJECT		
PIPE MATERIAL SHEET	R-26968	STP-B878(001)		

CHECKED: DFS CHECKED: LCS