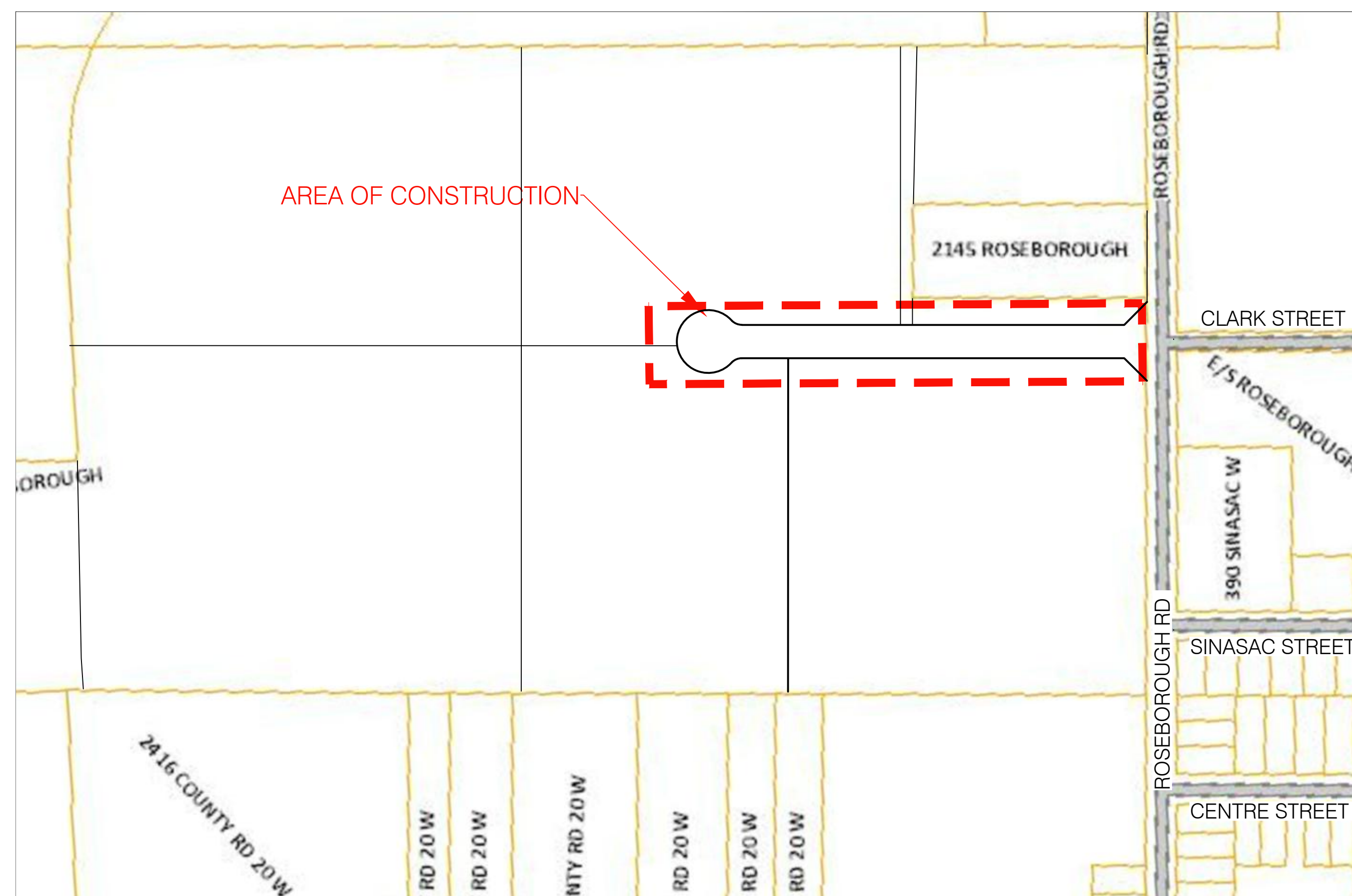
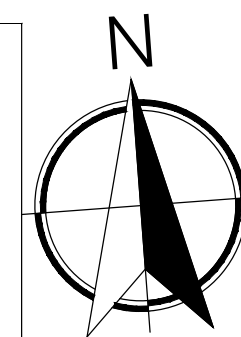


COLLAVINO BUSINESS PARK HARROW CENTRE IN THE TOWN OF ESSEX



KEY PLAN
N.T.S.



SHEET INDEX	
SHEET NUMBER	DESCRIPTION
1	TITLE PAGE
2	SITE PLAN
3	PLAN & PROFILE STATION 0+000 TO 0+180
4	PLAN & PROFILE STATION 0+180 TO 0+360
5	PLAN & PROFILE STATION 0+360 TO 0+560
6	PLAN & PROFILE STATION 0+560 TO 0+720
7	GENERAL DETAILS

BENCHMARK	
BM -1 ELEV. 189.203	TOP NUT OF EXISTING FIRE HYDRANT ON THE SOUTHEAST CORNER OF SINASAC STREET AND ROSEBOROUGH ROAD

NOTES

ATTENTION
ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS, REVISED STATUTES OF ONTARIO, 1990 CHAPTER 0.1 AS AMENDED, ONTARIO REGULATION 213/91, R.R.O. 1990 REG. 834 AS ADMINISTERED BY THE ONTARIO MINISTRY OF LABOUR AND ALL SUBSEQUENT AMENDMENTS OF SAID ACT.

UTILITY LOCATIONS
THE LOCATION OF THE UNDERGROUND UTILITIES AS SHOWN ON THE DRAWING ARE APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES DURING THE CONSTRUCTION OF THE PROJECT. THE CONTRACTOR AGREES TO INDEMNIFY THE OWNER AND CROZIER BAIRD ENGINEERS AGAINST ANY CLAIMS WHICH ARISE FROM HIS ACTIONS.

PROPERTY LINES
THE PROPERTY LINES AND DIMENSIONS SHOWN ARE BASED ON SURVEY BARS FOUND ON THE SITE AND ARE NOT BASED ON A SURVEY DRAWING PRODUCED BY AN ONTARIO LAND SURVEYOR. THE PROPERTY LINES SHOULD BE CONSIDERED AS APPROXIMATELY ONLY AND NOT A LEGAL PLAN OF SURVEY

CATCHBASINS
ALL CATCHBASINS TO BE CURB INLET CATCHBASINS WITH P-43 FRAME AND COVERS. SEE DETAILS ON SHEET 7

LEGEND		
DESCRIPTION	EXISTING	PROPOSED
WATERMAIN	---	---
WATER CURB STOP		CS
WATER VALVE		⊗
FIRE HYDRANT		⊗
WATERMAIN TEES & BENDS		TEE, 90°, 45°, 22.5°
SANITARY SEWER	---	SA
SANITARY CLEANOUT		SAN
SANITARY MANHOLE	● SANMH	● SAN
STORM SEWER	---	---
STORM MANHOLE	● STMH	● STM
STORM CLEANOUT		STM
CATCH BASIN		⊗
SUBDRAIN		---



DATE: SEPTEMBER 1, 2015

Bruce D. Crozier
BRUCE D. CROZIER, P. ENG

DATE	REVISIONS
SEPT. 1, 2015	REVISIONS AS REQUESTED BY OWNER
SEPT. 24, 2015	REVISIONS AS REQUESTED BY OWNER
SEPT. 29, 2015	REVISIONS AS REQUESTED BY ENGINEER
OCTOBER 5, 2015	REVISIONS AS REQUESTED BY ERCA
NOV. 25, 2015	REVISIONS AS REQUESTED BY MUNICIPALITY



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27 PRINCESS STREET, SUITE #102
LEAMINGTON, ONTARIO
N8H 2X8

**ENGINEERS
PLANNERS
ARCHITECTS**

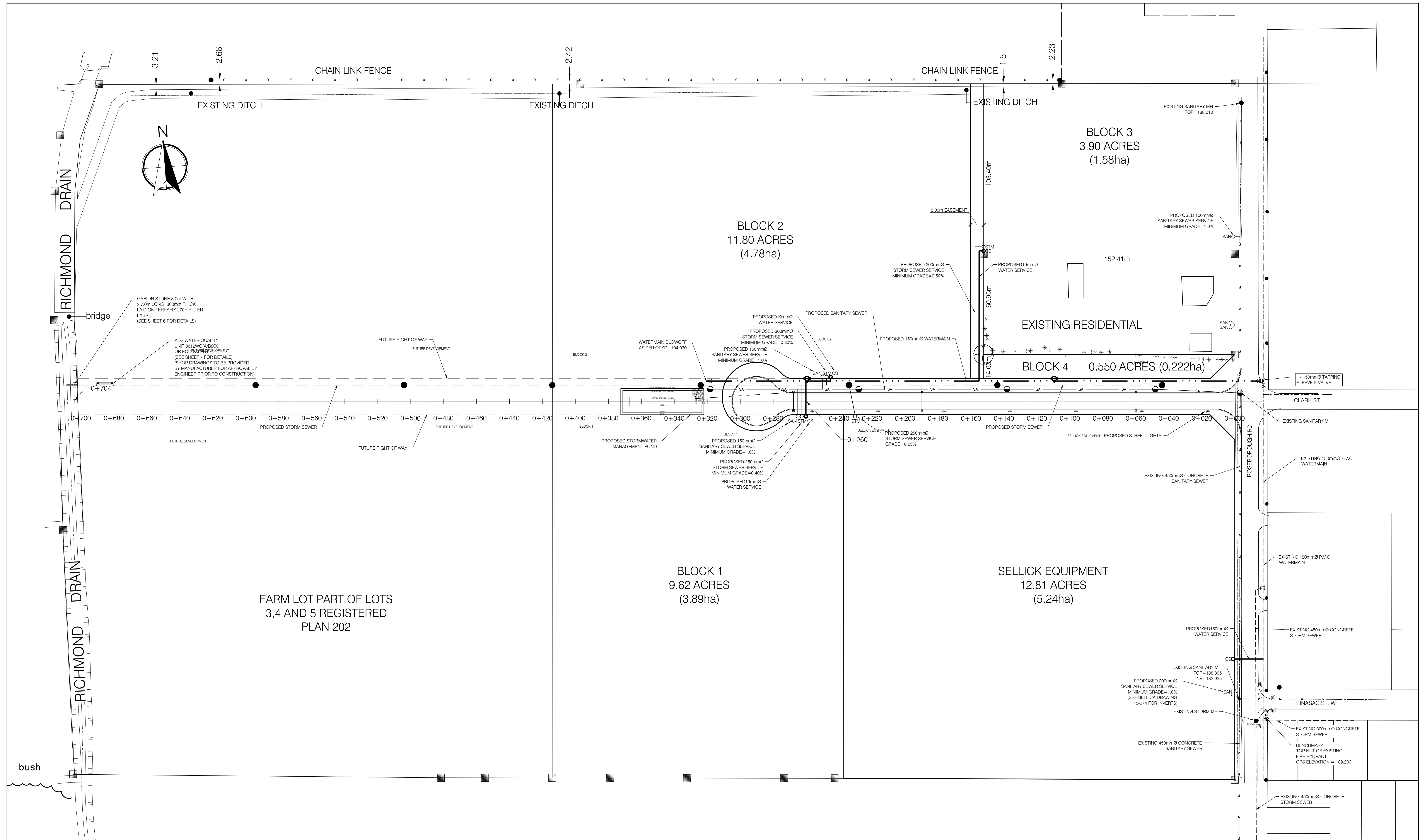
1000 - 267 PELLISSIER STREET,
WINDSOR, ONTARIO
N9A 4K4.

A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE:
**COLLAVINO BUSINESS PARK
HARROW CENTRE (TOWN OF ESSEX)**

SHEET TITLE:
TITLE PAGE

DATE: SEPTEMBER 1, 2015	PROJECT NO: 15-075
SCALE: 1:1000	
DRAWN BY: T.Y	SHEET NO: 1
CHECKED BY: B.D.C	



DATE: SEPTEMBER 1, 2015

Bruce D. Crozier
 BRUCE D. CROZIER, P. ENG

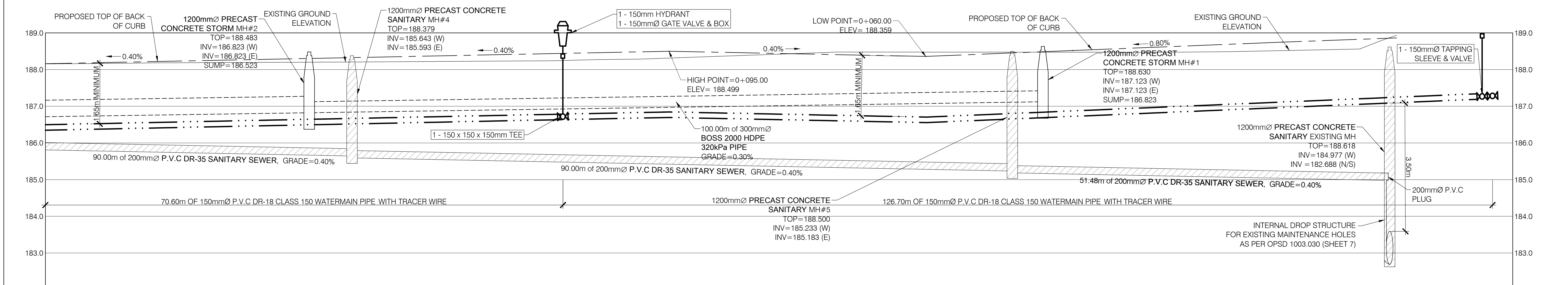
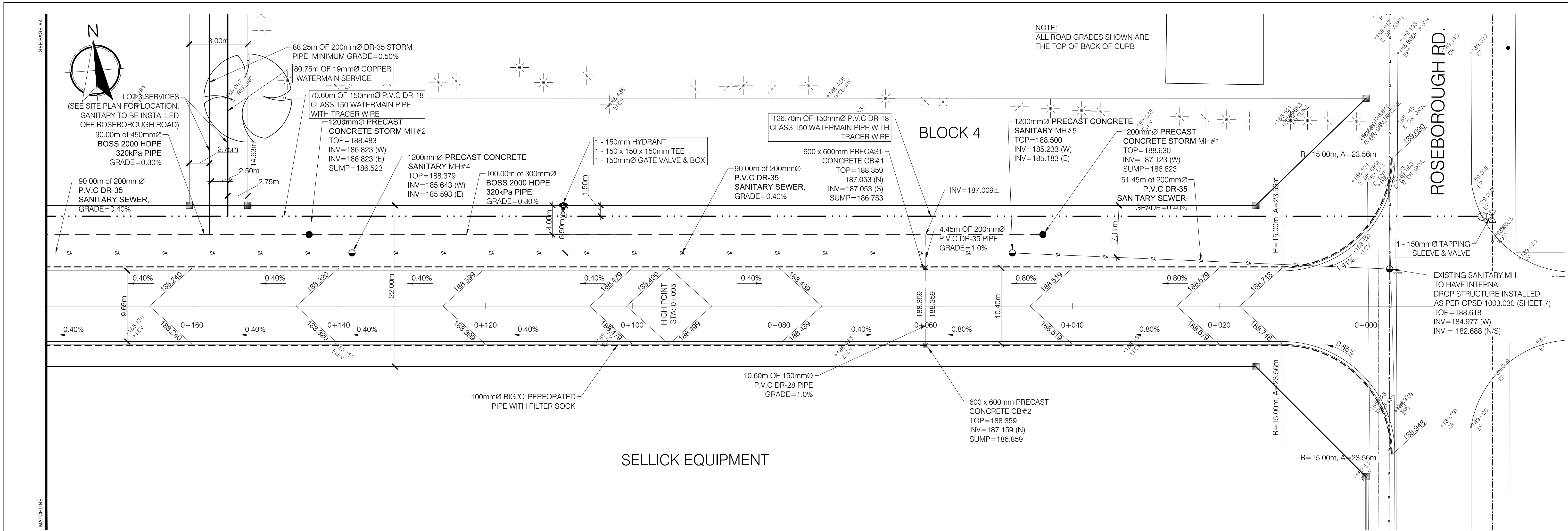
DATE	REVISIONS
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SEPT. 29, 2015	REVISIONS AS REQUESTED BY ENGINEER
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crozierbaird ENGINEERS PLANNERS ARCHITECTS

27 PRINCESS STREET, SUITE #102, LEAMINGTON, ONTARIO N8H 2X8
 1000 - 267 PELLISSIER STREET, WINDSOR, ONTARIO N9A 4K4
 A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE: COLLAVINO BUSINESS PARK HARROW CENTRE (TOWN OF ESSEX)	DATE: SEPTEMBER 1, 2015	PROJECT NO: 15-075
SHEET TITLE: SITE PLAN	SCALE: 1:1000	DRAWN BY: T.Y
	CHECKED BY: B.D.C	SHEET NO: 2



STATION	0+180	0+160	0+140	0+120	0+100	0+095	0+080	0+060	0+040	0+020	0+011.40	0+000	-0+020
PROPOSED TOP OF CURB	188.100	188.240	188.320	188.399	188.479	188.499	188.439	188.359	188.519	188.679	188.748	188.823	188.918
STORM SEWER INVERTS		186.823	186.823						187.123				
SANITARY SEWER INVERTS			185.643	185.593					185.233	185.183		184.977	



DATE: SEPTEMBER 1, 2015

Bruce D. Crozier
BRUCE D. CROZIER, P. ENG

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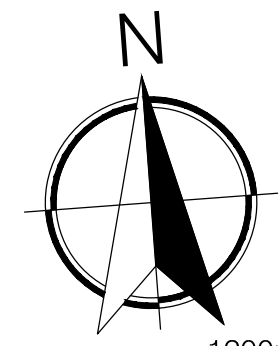
essex | **crozierbaird** | **ENGINEERS PLANNERS ARCHITECTS**

27 PRINCESS STREET, SUITE #102, LEAMINGTON, ONTARIO N8H 2X8
1000 - 267 PELLISSIER STREET, WINDSOR, ONTARIO N9A 4K4
A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE: **COLLAVINO BUSINESS PARK**
HARROW CENTRE (TOWN OF ESSEX)

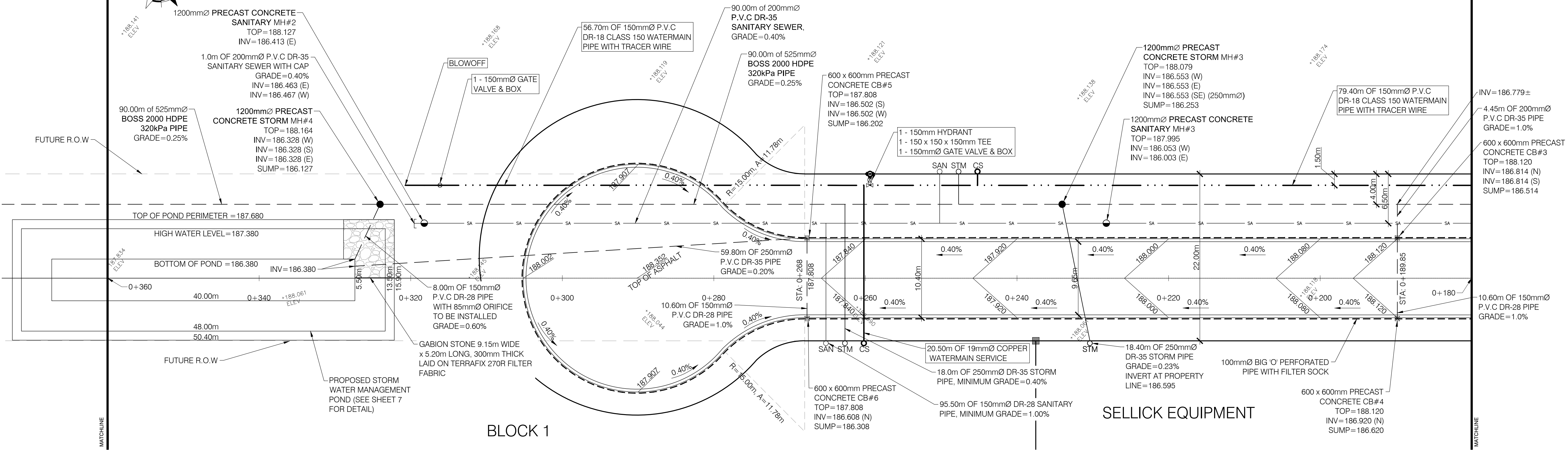
SHEET TITLE: **PLAN & PROFILE STATION 0+000 TO 0+180**

DATE: SEPTEMBER 1, 2015	PROJECT NO: 15-075
SCALE: 1:250 HOR 1:50 VER	
DRAWN BY: T.Y	SHEET NO: 3
CHECKED BY: B.D.C	

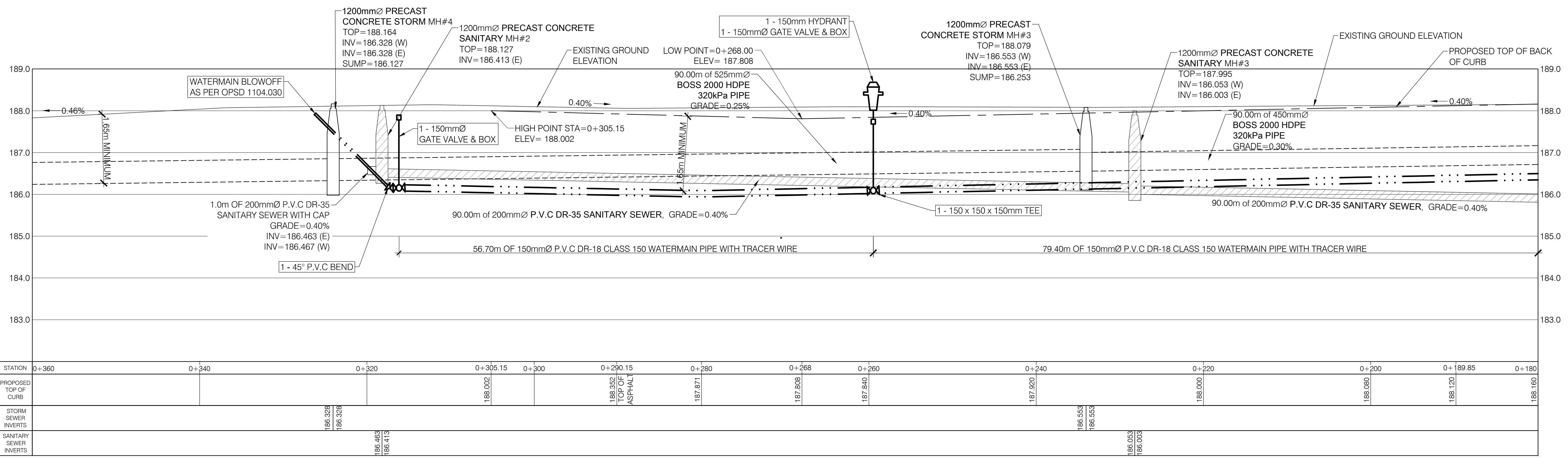


NOTE:
ALL ROAD GRADES SHOWN ARE
THE TOP OF BACK OF CURB

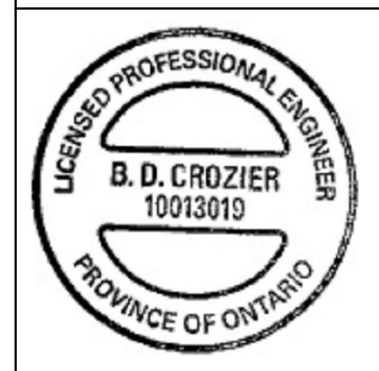
BLOCK 2



BLOCK 1



STATION	0+360	0+340	0+320	0+305.15	0+300	0+290.15	0+280	0+268	0+260	0+240	0+220	0+200	0+189.85	0+180
PROPOSED TOP OF CURB				188.002		188.352	187.871	187.808	187.840	187.920	188.000	188.080	188.120	188.160
STORM SEWER INVERTS			186.328 186.328											
SANITARY SEWER INVERTS			186.463 186.413							186.553 186.553	186.053 186.003			



DATE: SEPTEMBER 1, 2015
Bruce D. Crozier
BRUCE D. CROZIER, P. ENG

DATE	REVISIONS
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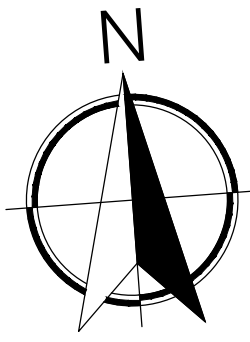


crozierbaird
27 PRINCESS STREET, SUITE #102
LEAMINGTON, ONTARIO
N8H 2X8

**ENGINEERS
PLANNERS
ARCHITECTS**
1000 - 267 PELLISSIER STREET,
WINDSOR, ONTARIO
N9A 4K4
A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE:
COLLAVINO BUSINESS PARK
HARROW CENTRE (TOWN OF ESSEX)
SHEET TITLE:
PLAN & PROFILE STATION 0+180 TO 0+360

DATE: SEPTEMBER 1, 2015	PROJECT NO: 15-075
SCALE: 1:250 HOR 1:50 VER	SHEET NO: 4
DRAWN BY: T.Y	CHECKED BY: B.D.C



FUTURE DEVELOPMENT

BLOCK 2

90.00m of 600mmØ
BOSS 2000 HDPE
320kPa PIPE
GRADE=0.25%

1200mmØ PRECAST
CONCRETE STORM MH#6
TOP=187.492
INV=185.923 (W)
INV=185.923 (E)
SUMP=185.623

90.00m of 600mmØ
BOSS 2000 HDPE
320kPa PIPE
GRADE=0.20%

1200mmØ PRECAST
CONCRETE STORM MH#5
TOP=188.078
INV=186.103 (W)
INV=186.103 (E)
SUMP=185.803

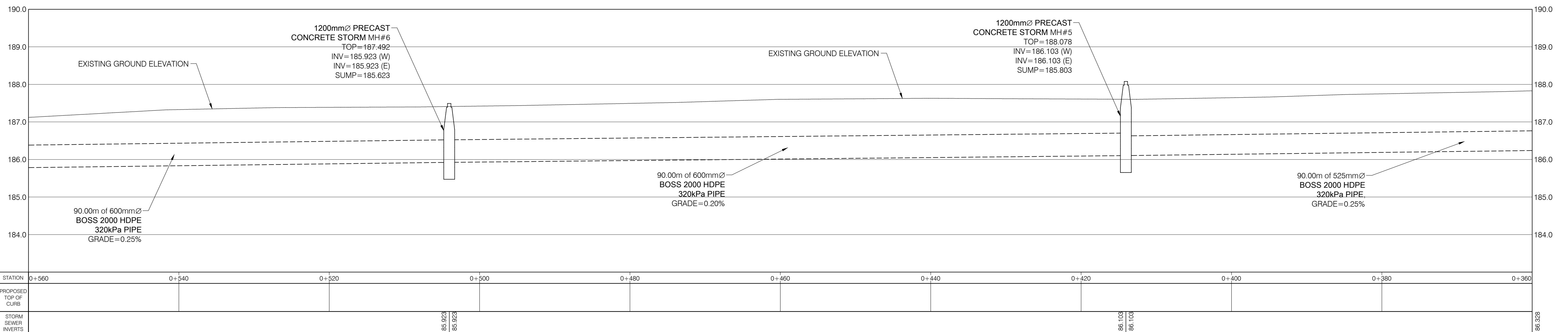
FUTURE RIGHT OF WAY

FUTURE R.O.W

0+560 0+540 0+520 0+500 0+480 0+460 0+440 0+420 0+400 0+380

FUTURE DEVELOPMENT

BLOCK 1



STATION	0+560	0+540	0+520	0+500	0+480	0+460	0+440	0+420	0+400	0+380	0+360
PROPOSED TOP OF CURB											
STORM SEWER INVERTS			185.923	185.923				186.103	186.103		186.328



DATE: SEPTEMBER 1, 2015

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BRUCE D. CROZIER, P. ENG

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27 PRINCESS STREET, SUITE #102
LEAMINGTON, ONTARIO
N8H 2X8

1000 - 267 PELLISSIER STREET,
WINDSOR, ONTARIO
N9A 4K4

ENGINEERS
PLANNERS
ARCHITECTS

A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE:

COLLAVINO BUSINESS PARK
HARROW CENTRE (TOWN OF ESSEX)

SHEET TITLE:

PLAN & PROFILE STATION 0+360 TO 0+560

DATE:

SEPTEMBER 1, 2015

SCALE:
1:250 HOR 1:50 VER

DRAWN BY:

T.Y

CHECKED BY:

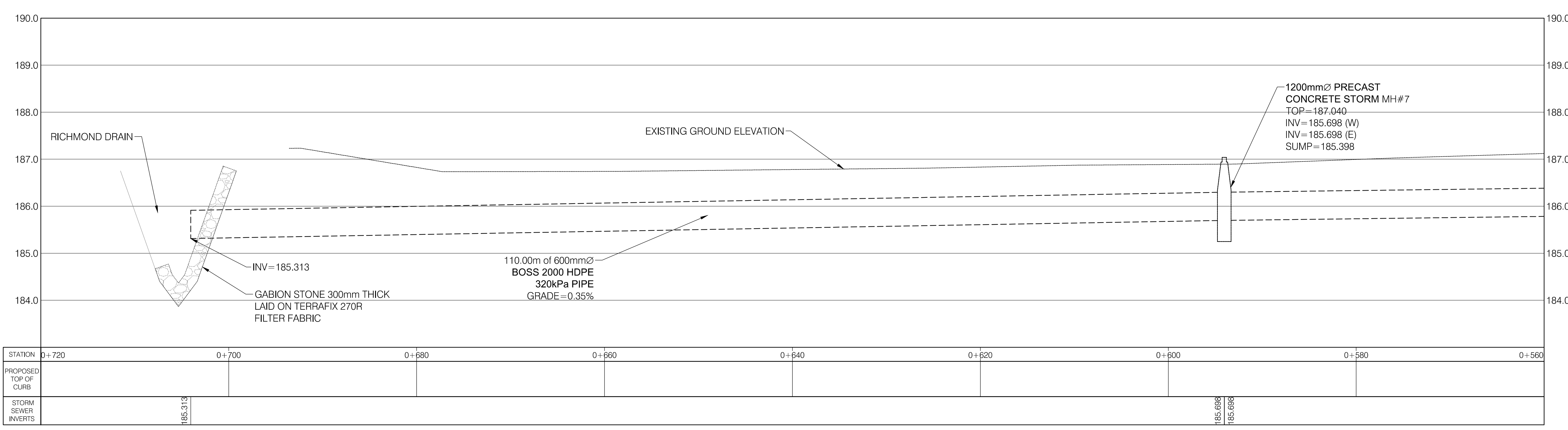
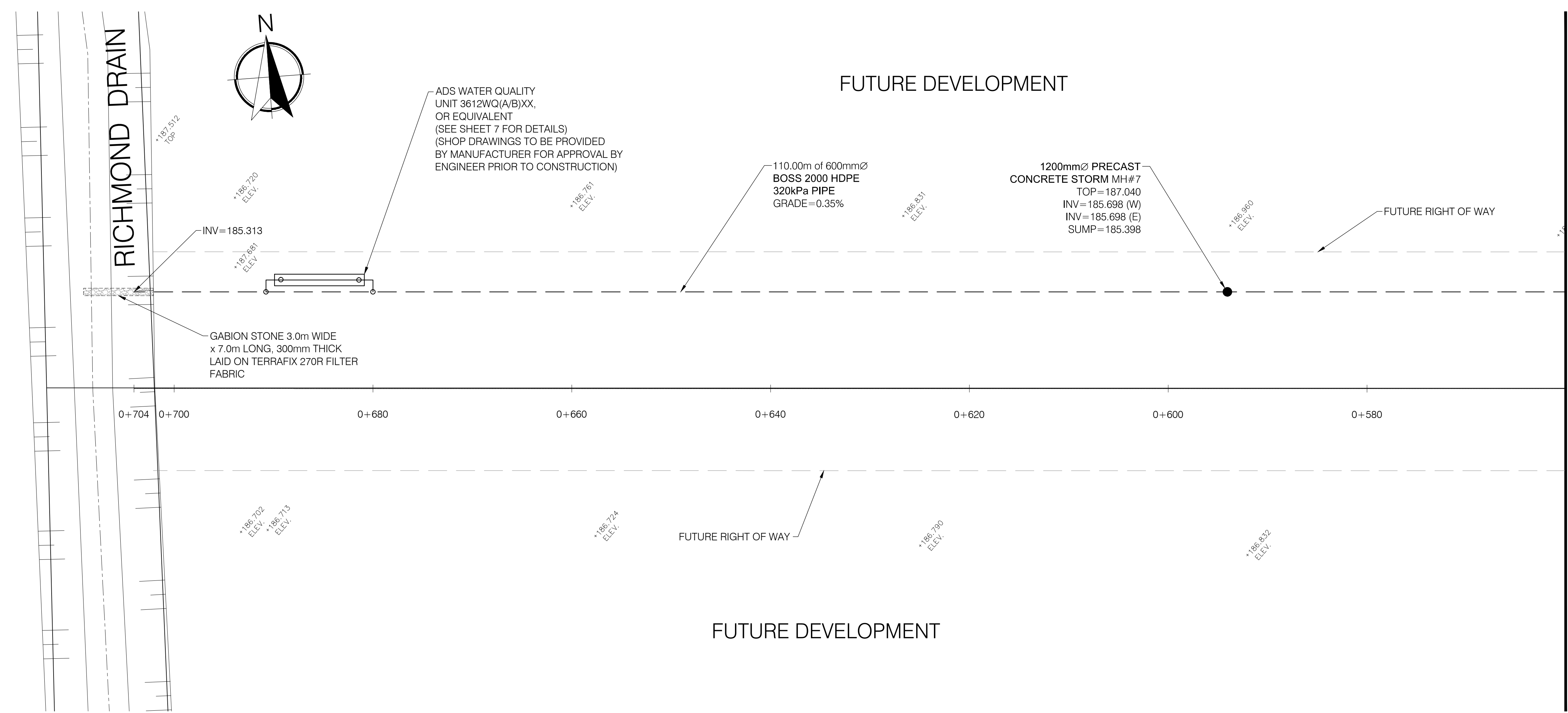
B.D.C

PROJECT NO:

15-075

SHEET NO:

5



STATION	0+720	0+700	0+680	0+660	0+640	0+620	0+600	0+580	0+560
PROPOSED TOP OF CURB									
STORM SEWER INVERTS	185.313						185.698	185.698	



DATE: SEPTEMBER 1, 2015

Bruce D. Crozier
 BRUCE D. CROZIER, P. ENG

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crozierbaird ENGINEERS PLANNERS ARCHITECTS

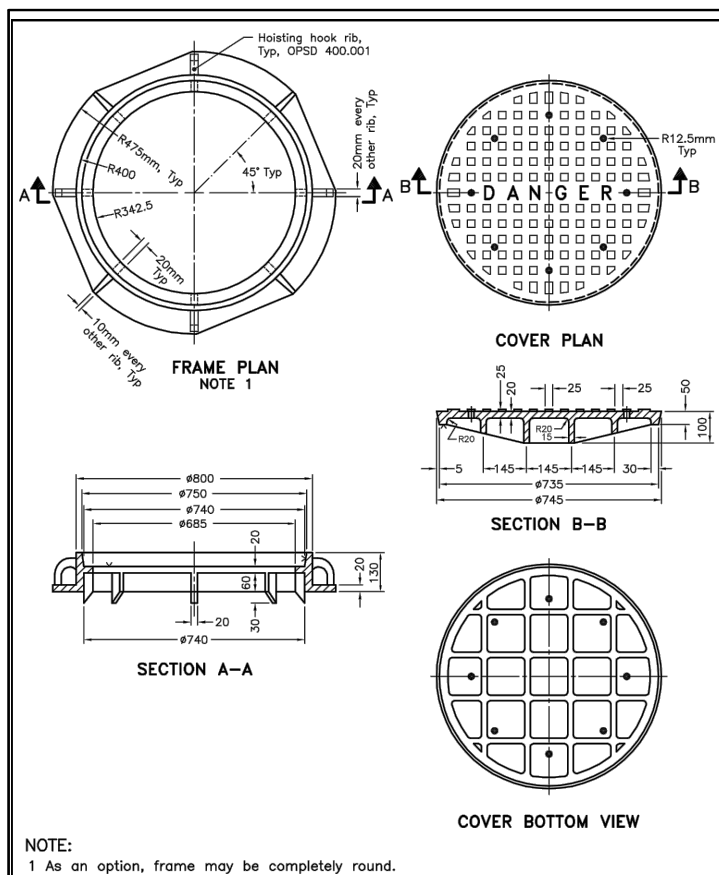
27 PRINCESS STREET, SUITE #102
 LEAMINGTON, ONTARIO N8H 2X8
 A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

1000 - 267 PELLISSIER STREET,
 WINDSOR, ONTARIO N9A 4K4.

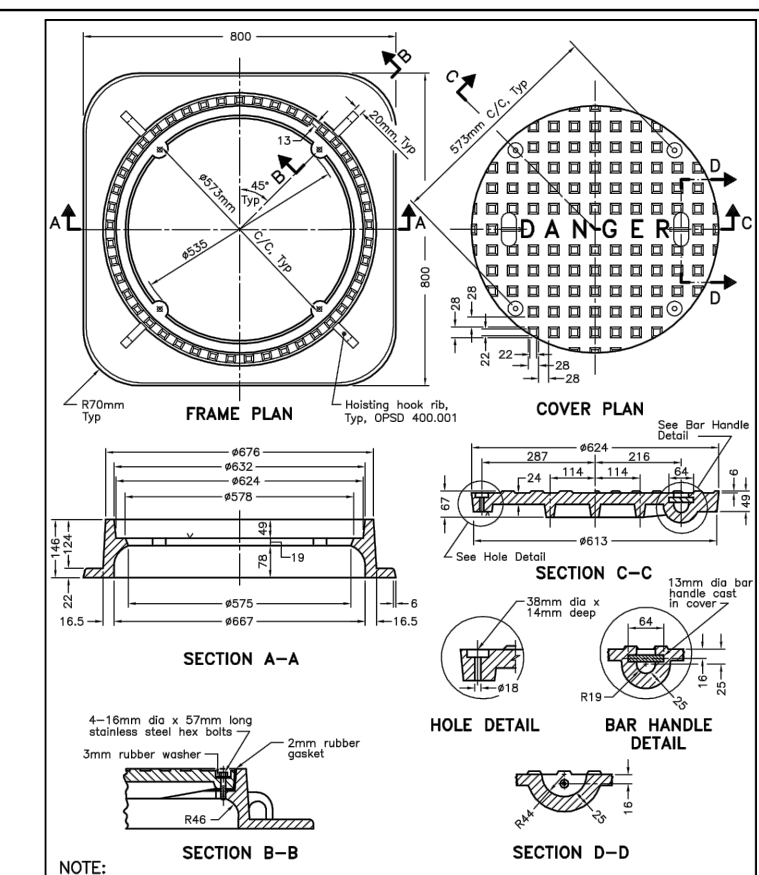
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COLLAVINO BUSINESS PARK
 HARROW CENTRE (TOWN OF ESSEX)

SHEET TITLE:
PLAN & PROFILE STATION 0+560 TO 0+720

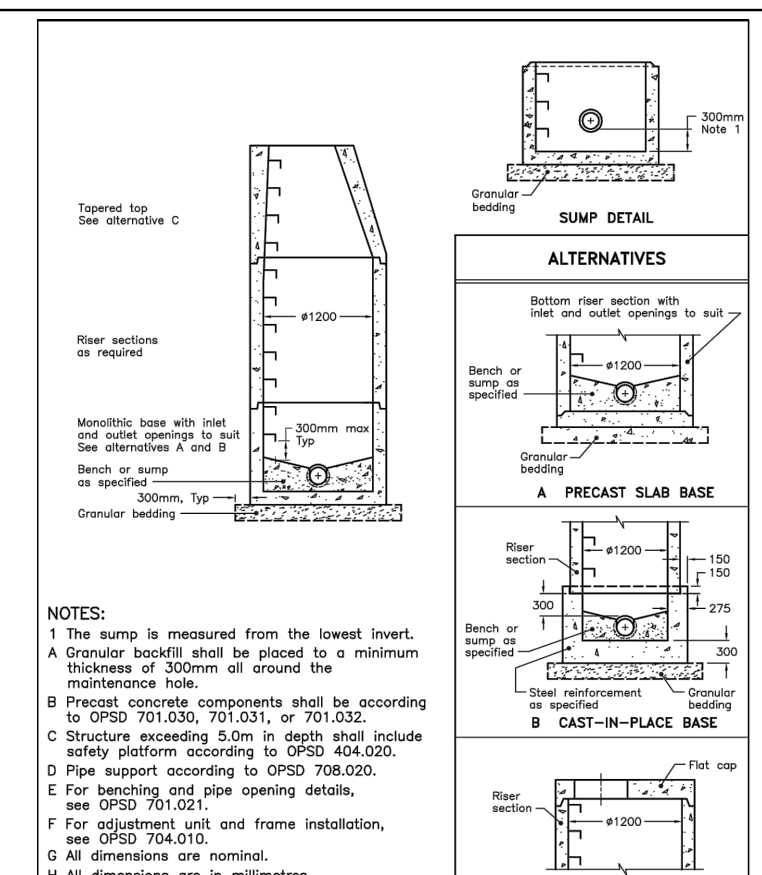
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CHECKED BY: B.D.C	



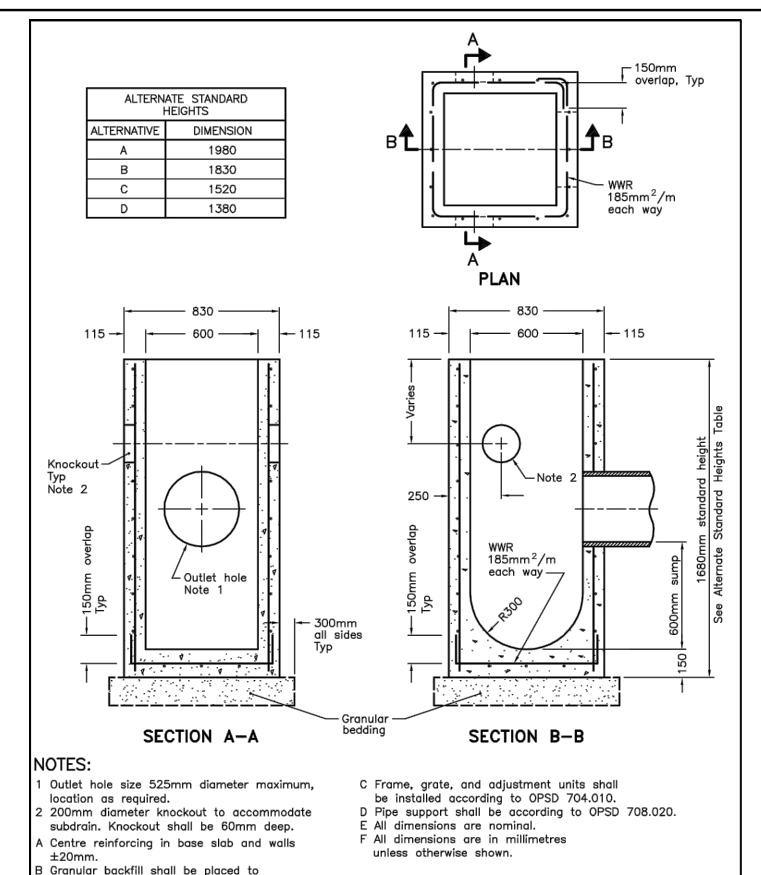
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 1
CAST IRON, CIRCULAR FRAME WITH CIRCULAR 745mm COVER FOR MAINTENANCE HOLES
 OPSD 401.020



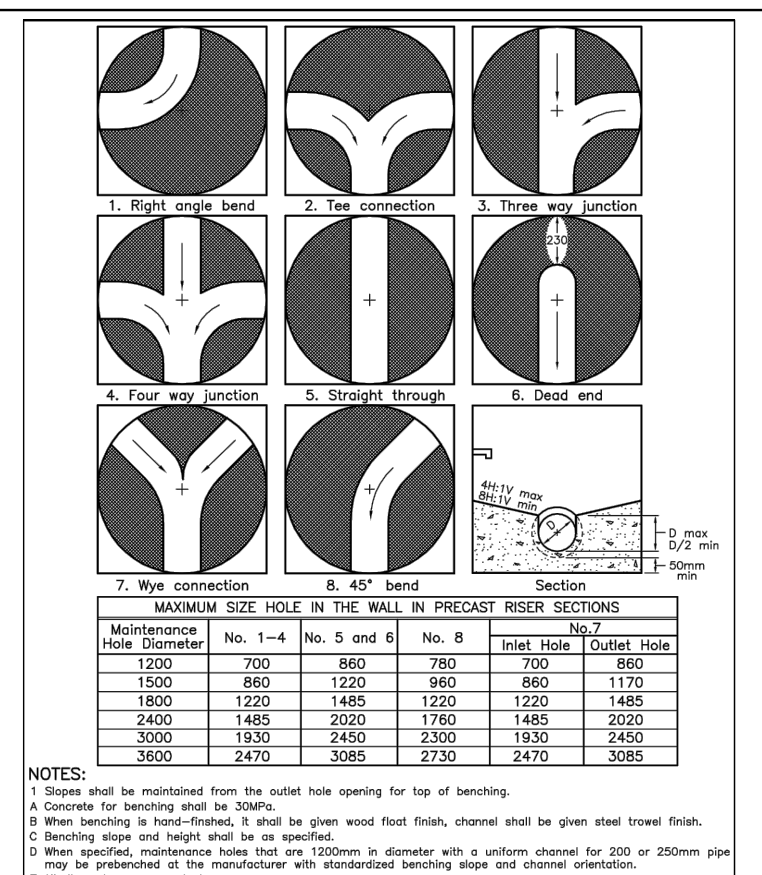
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 1
CAST IRON, SQUARE FRAME WITH CIRCULAR WATERTIGHT COVER FOR MAINTENANCE HOLES
 OPSD 401.030



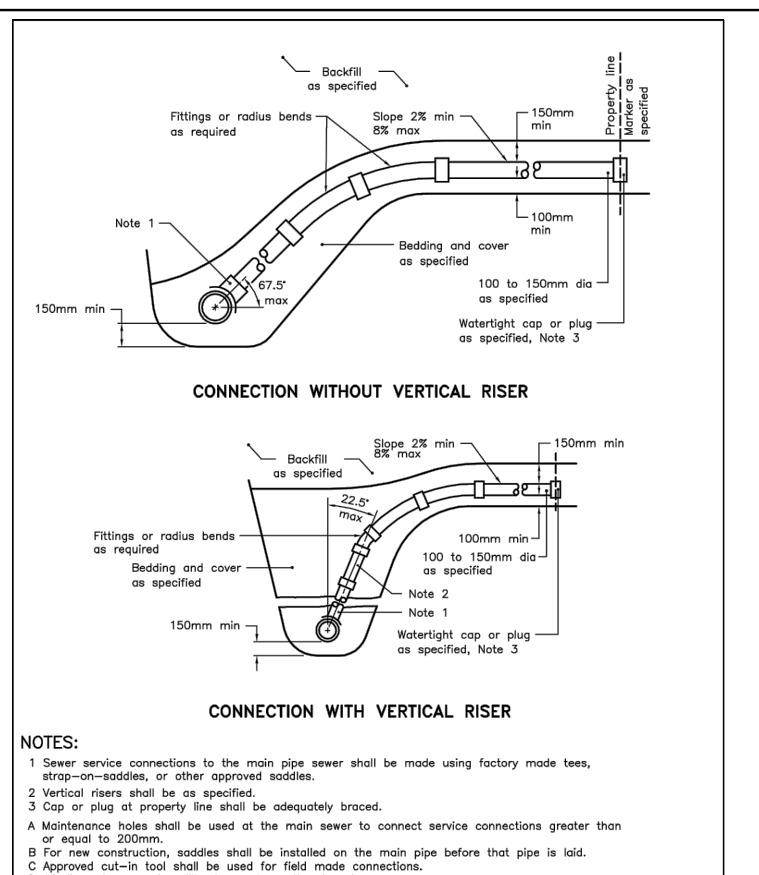
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 1
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER
 OPSD 701.010



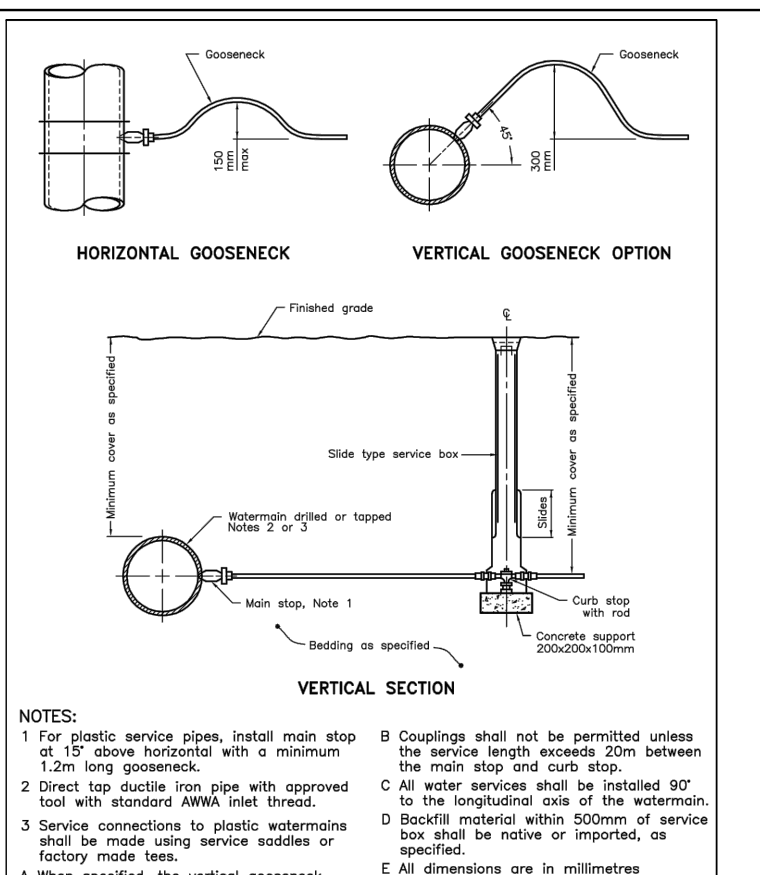
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 1
PRECAST CONCRETE CATCH BASIN 600x900mm
 OPSD 705.010



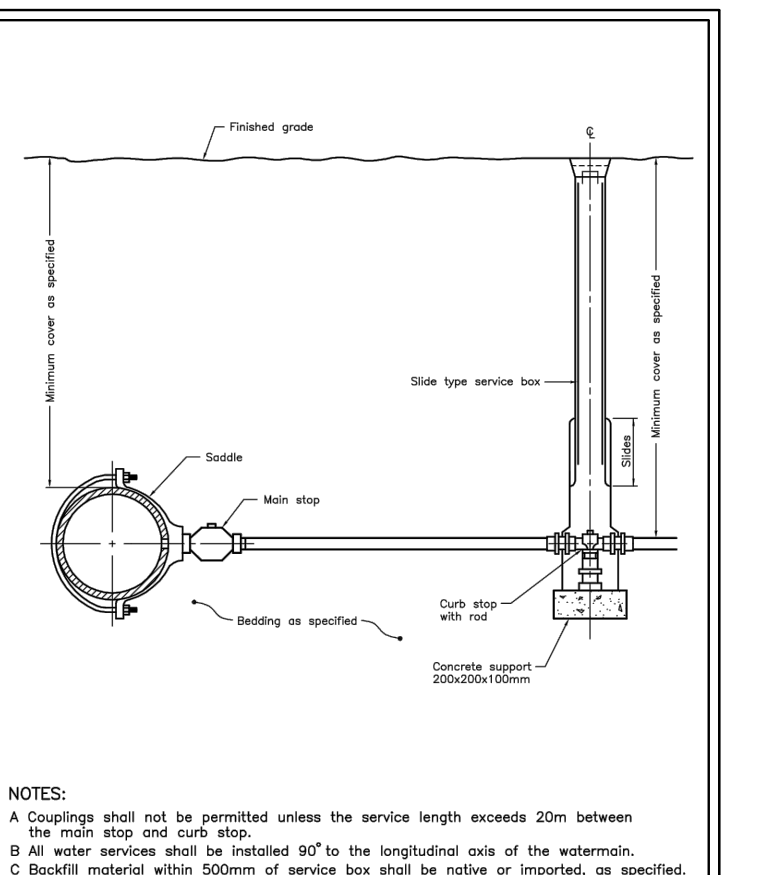
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES
 OPSD 701.021



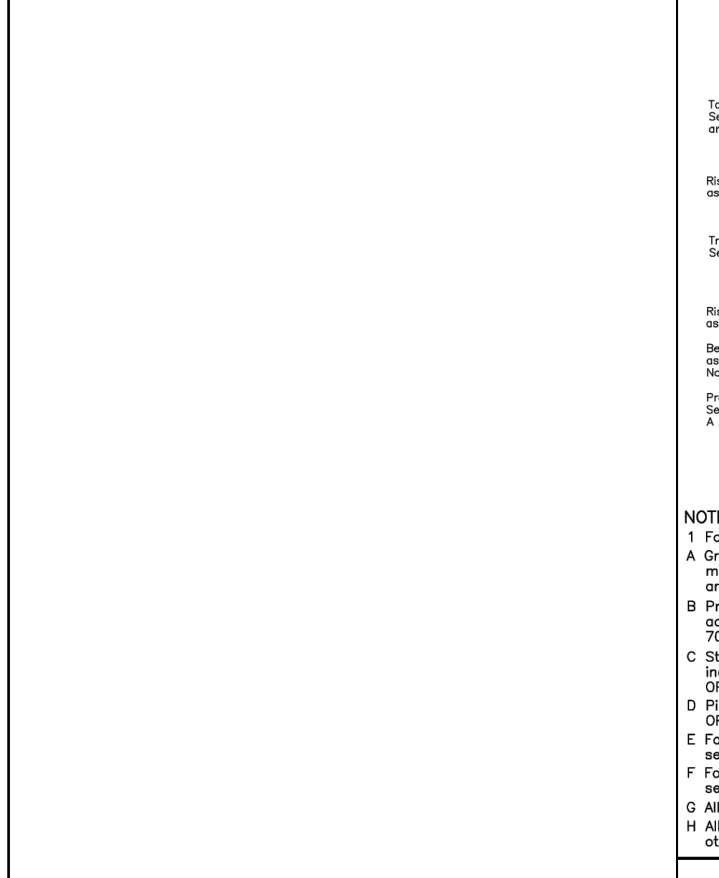
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2011 Rev 2
SEWER SERVICE CONNECTIONS FOR RIGID MAIN PIPE SEWER
 OPSD 1006.010



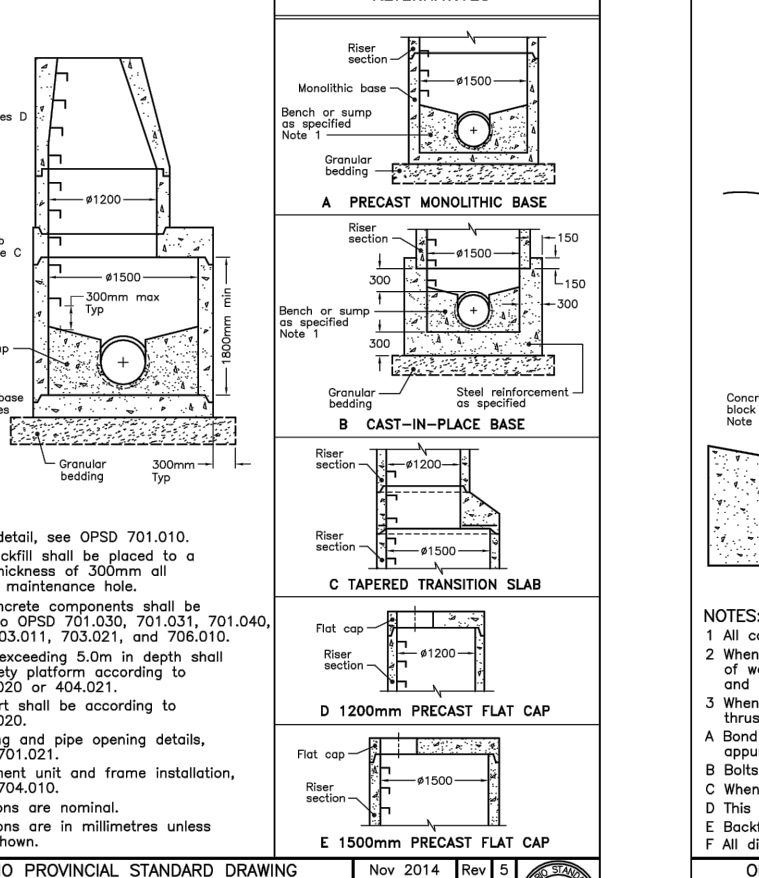
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 1
WATER SERVICE CONNECTION 19 and 25mm DIAMETER SIZES
 OPSD 1104.010



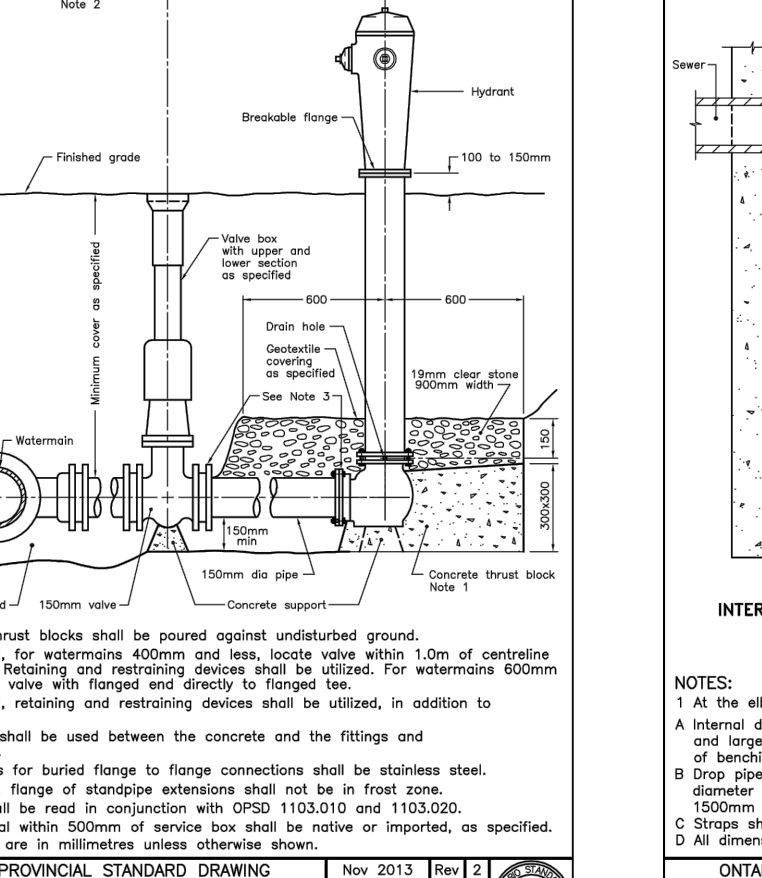
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2
WATER SERVICE CONNECTION 32, 38, and 50mm DIAMETER SIZES
 OPSD 1104.020



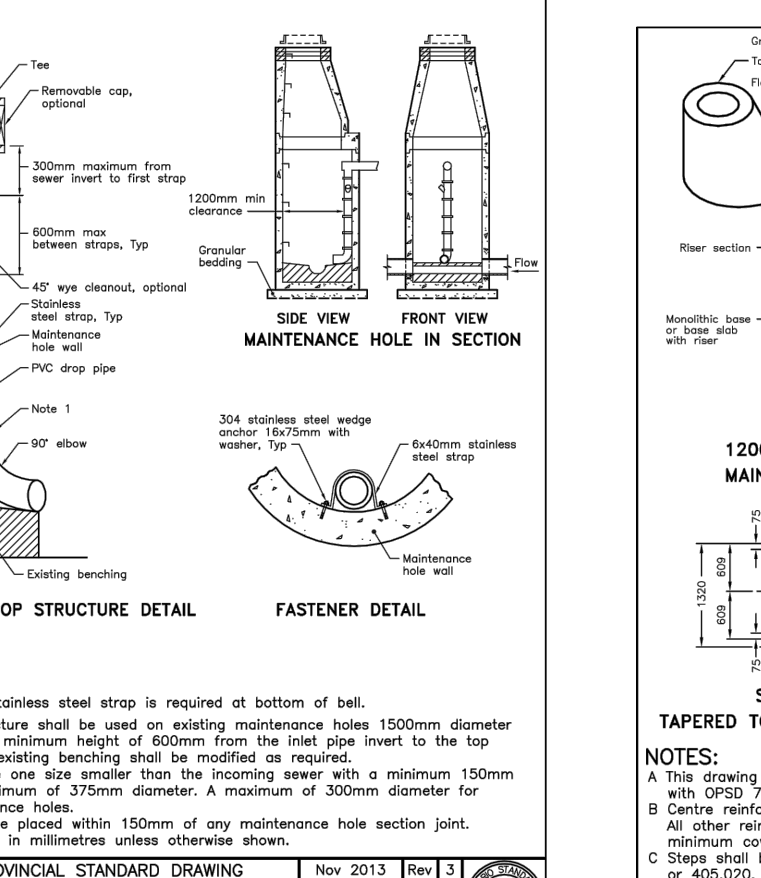
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PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER
 OPSD 701.011



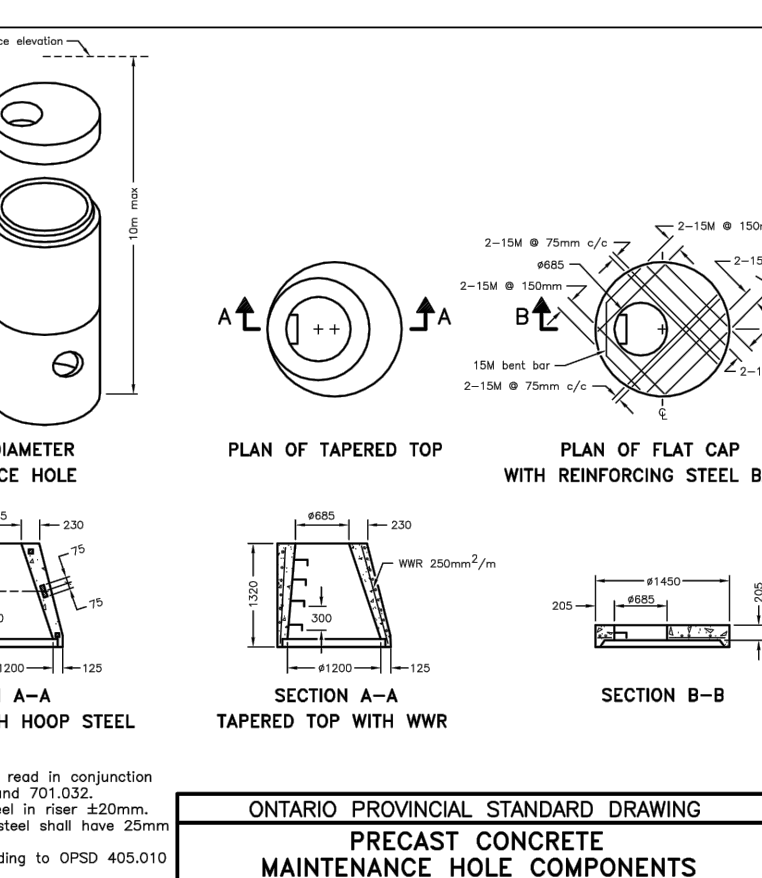
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HYDRANT INSTALLATION
 OPSD 1105.010



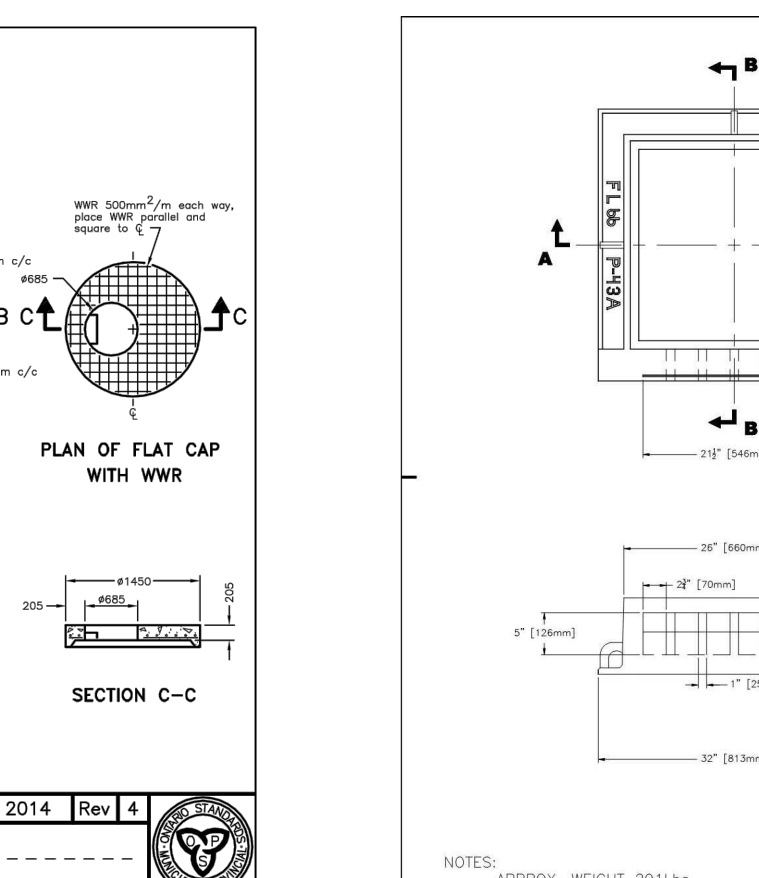
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INTERNAL DROP STRUCTURE FOR EXISTING MAINTENANCE HOLES
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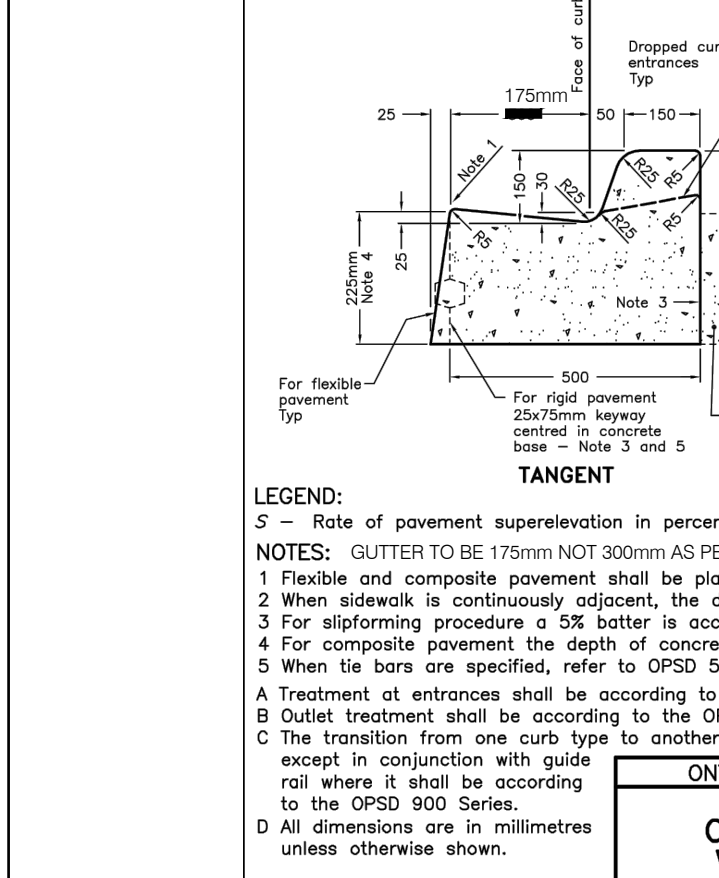
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 4
PRECAST CONCRETE MAINTENANCE HOLE COMPONENTS 1200mm DIAMETER TAPERED TOP AND FLAT CAP
 OPSD 701.030



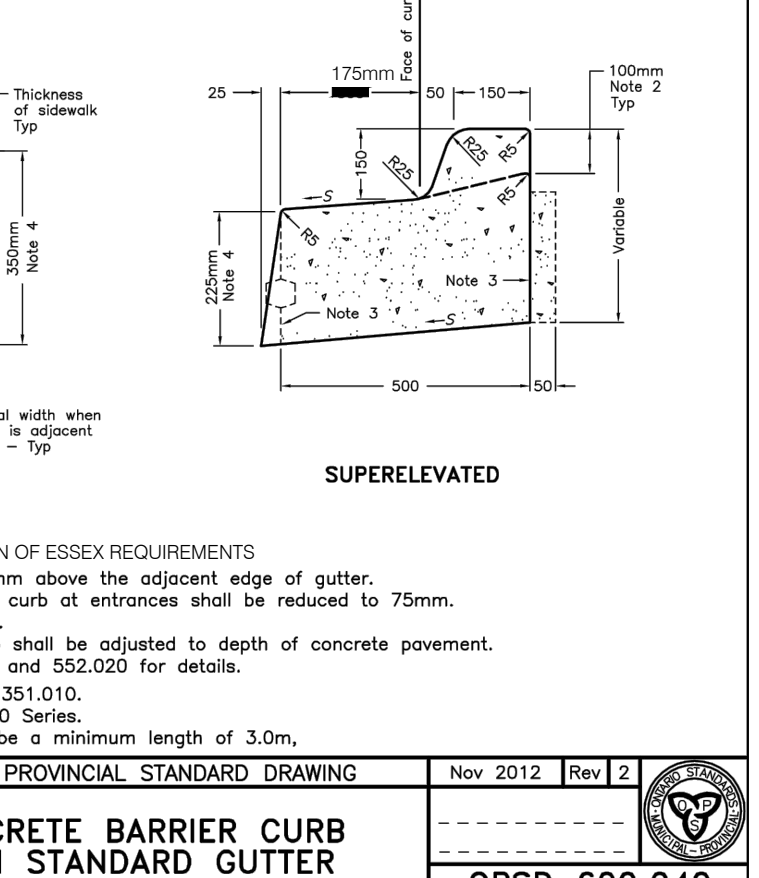
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 1
STORM SERVICE CLEAN-OUT



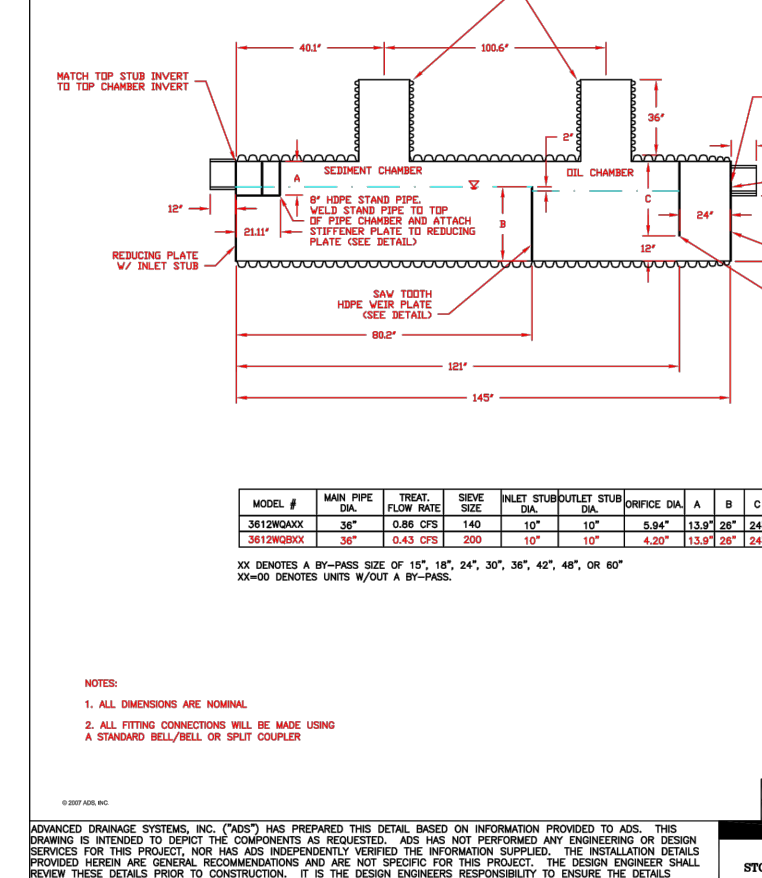
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 1
SANITARY SERVICE CLEAN-OUT



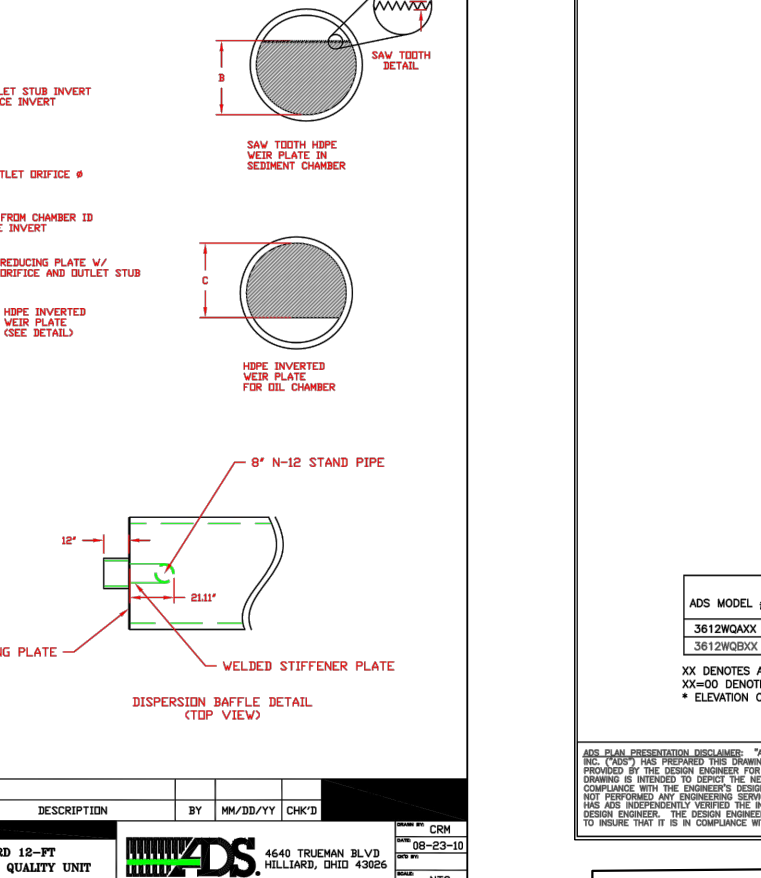
ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2
CONCRETE BARRIER CURB WITH STANDARD GUTTER
 OPSD 600.040



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2
BLOW OFF INSTALLATION
 OPSD 1104.030



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2
TYPICAL ROAD CROSS-SECTION
 SCALE: 1:100



ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2
TYPICAL POND CROSS-SECTION
 SCALE: 1:50

DATE: SEPTEMBER 1, 2015

BRUCE D. CROZIER, P. ENG

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27 PRINCESS STREET, SUITE #102, LEAMINGTON, ONTARIO N8H 2X8
 1000 - 267 PELLISSIER STREET, WINDSOR, ONTARIO N9A 4K4
 A DIVISION OF MATTHEW J. BAIRD CONSULTING SERVICES INC.

PROJECT TITLE: **COLLAVINO BUSINESS PARK**
 HARROW CENTRE (TOWN OF ESSEX)

SHEET TITLE: **GENERAL DETAILS**

DATE: SEPTEMBER 1, 2015
 SCALE: N.T.S.
 DRAWN BY: T.Y.
 CHECKED BY: B.D.C.

PROJECT NO: **15-075**
 SHEET NO: **7**