

HANS P. NEUMANN ARCHITECT INC.

1520 Highland Drive North, Kelowna, B.C. V1Y 4K5

Phone: (250) 868-0878 Email: hans@hpna.ca

Principal: Hans P. Neumann, Architect AIBC, B.Arch., B.E.S.

January 04, 2023

Tyler Caswell, Planner
City of Kelowna Council
1435 Water Street
Kelowna, B.C. V1Y 1J4

Re: Design Rationale for I3 Heavy Industrial Project @ 270 Hiram Walker Court

The proposed project consists of 3 (three) multi-tenant buildings, with a total building area of $\pm 63,000$ sq.ft. The buildings are organized around an over-sized central courtyard with additional vehicular circulation around the perimeter of the site. The entrance is located on the south side of the property off of Hiram Walker Court, with the paved parking/loading area at the front of the buildings allowing efficient and convenient vehicular circulation, as well as visual connection to the internally facing storefront industrial units. Each unit in the front buildings have a grade-level overhead door, while the units in the back building have overhead doors accessed from the rear joint-access agreement easement. The unit sizes vary between 1,500-4,600 sq.ft., which would cater to small or medium sized heavy industrial contractors or uses, complimenting the surrounding IND area noted in OCP 2040 plan for the north end of the City.

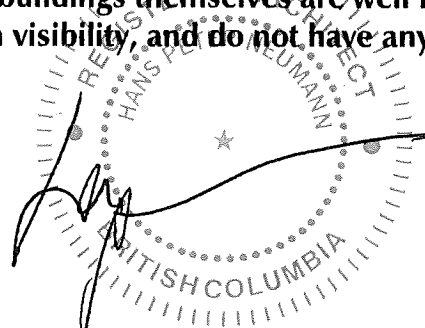
Professionally designed drought tolerant landscaping is located along the north and east sides of the property, screening the buildings from the adjacent sidewalks. The enclosed refuse/recycling bins are located at the west end of the parking area, out of public view.

The tilt-up concrete building design has contemporary storefronts with generous energy-efficient glazing. Each unit will have $\pm 28'$ clear ceiling height, with capacity for additional partial mezzanines. The building has been designed in such a manner as to create visual interest around the entire building. Articulation, in addition to color changes on the concrete walls will ensure that there are no long blank walls on any of the street facing façades.

With regard to CPTED (Crime Prevention Through Environmental Design), the subject property is located in the Hiram Walker Industrial Park and bounded by other heavy industrial uses. Recognizing the predominately industrial nature of the area, both employee and customer safety are key considerations. The parking areas are well lit with clearly defined pedestrian entrances to the building. The buildings themselves are well lit with security lighting along all sides to allow for maximum visibility, and do not have any features that would allow for hiding places.

Sincerely,


HANS P. NEUMANN, Architect AIBC





SOUTH PROPERTY LINE LOOKING EAST



EAST PROPERTY LINE LOOKING SOUTH



WEST PROPERTY LINE LOOKING NORTH



NORTH PROPERTY LINE LOOKING WEST

HANS P. NEUMANN ARCHITECT INC.

1520 HIGHLAND DRIVE NORTH, KELOWNA, B.C. V1Y 4K5 PHONE (250) 868-0878 FAX (250) 868-0837



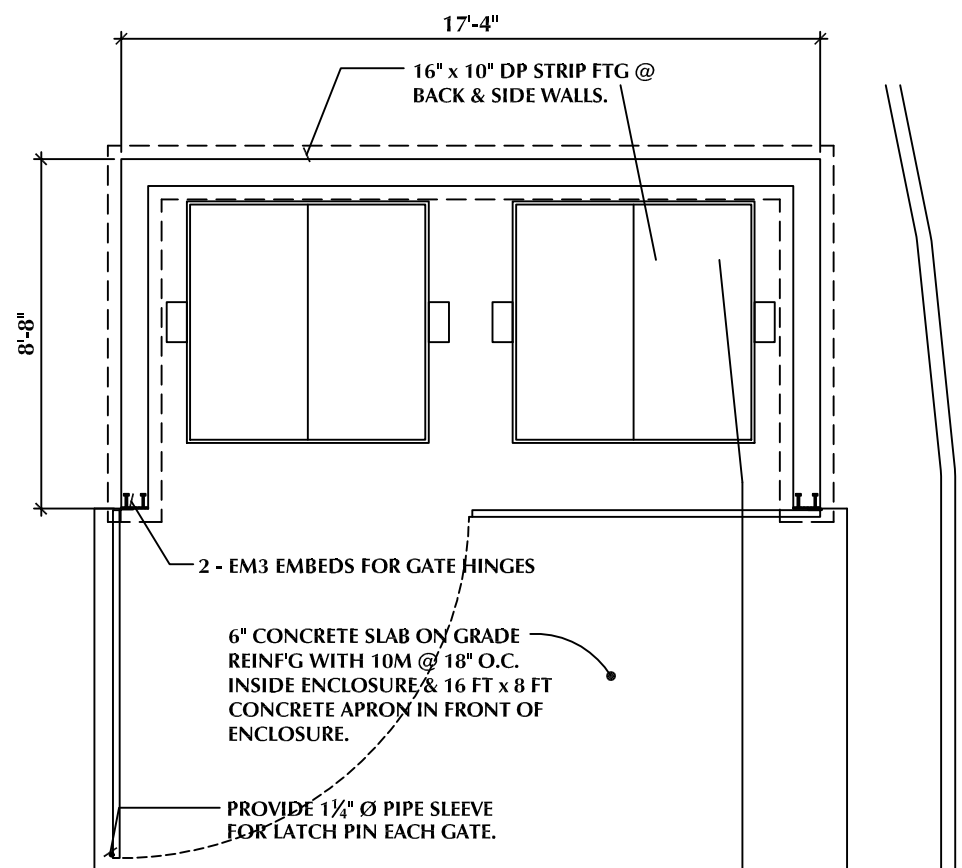
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE

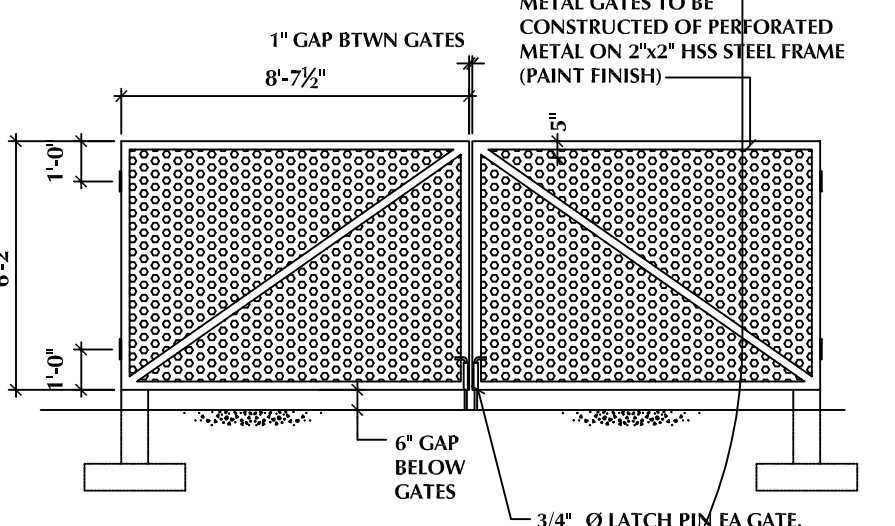
RENDERING/SITE PHOTOS



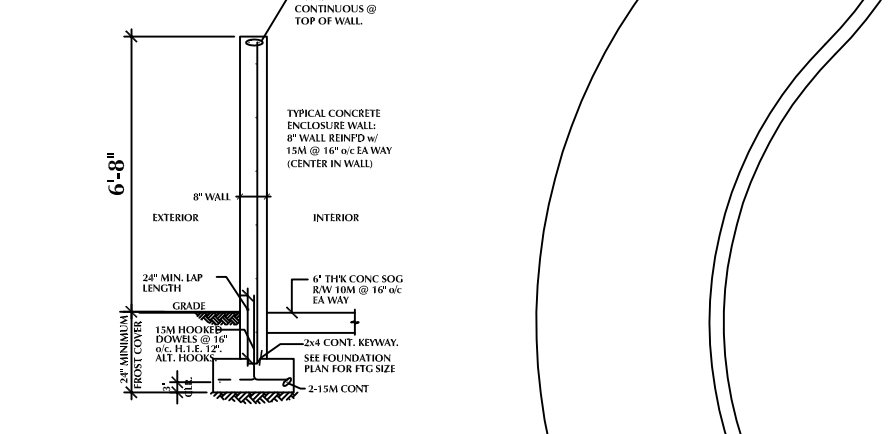
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	JAN 05/23	ISSUED FOR DEVELOPMENT PERMIT	DATE: OCTOBER 04, 2022
	FEB 13/23	RE-ISSUED FOR DEVELOPMENT PERMIT	DRAWN: HPN
			Drawing No.
			REVISION No.:



GARBAGE ENCLOSURE FOUNDATION PLAN
N.T.S.

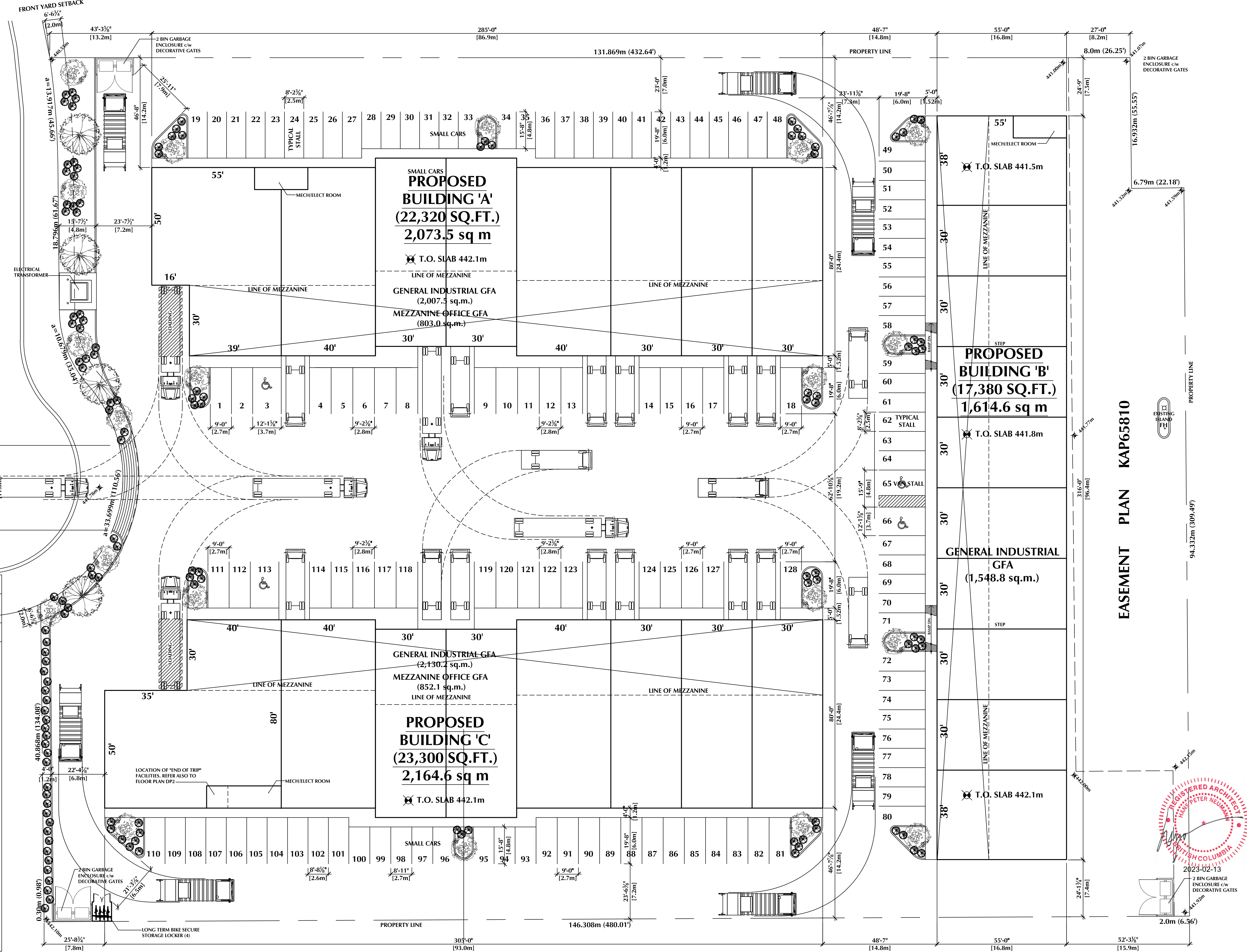


GARBAGE ENCLOSURE FRONT ELEVATION
N.T.S.



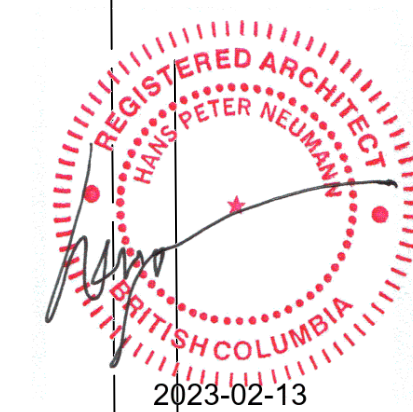
TYPICAL GARBAGE ENCLOSURE WALL SECTION
N.T.S.

Hiram Walker Court



PROJECT DATA		
CIVIC ADDRESS:	270 HIRAM WALKER COURT, KELOWNA, BC	
LEGAL DESCRIPTION:	PLAN EPP98124, LOT 3, SEC. 2, TWP 20, O.D.N.D.	
CURRENT ZONING:	I3 - HEAVY INDUSTRIAL	
ZONING BYLAW 12375 REQUIREMENTS		
SITE AREA =	16,029.4 sq.m. (172,545 sq.ft.)	
BUILDING AREA:		
BUILDING 'A' =	2,073.5 sq. m. (22,320 sq.ft.)	
BUILDING 'B' =	1,614.6 sq. m. (17,380 sq.ft.)	
BUILDING 'C' =	2,164.6 sq. m. (23,300 sq.ft.)	
TOTAL	5,852.7 sq. m. (63,000 sq.ft.)	
GROSS FLOOR AREA (GFA):		
BUILDING 'A' =	2,810.5 sq. m. (30,253 sq.ft.) incl. 40% MEZZANINES	
BUILDING 'B' =	2,167.1 sq. m. (23,327 sq.ft.) incl. 40% FUTURE MEZZANINES	
BUILDING 'C' =	2,933.1 sq. m. (31,573 sq.ft.) incl. 40% MEZZANINES	
TOTAL	7,910.7 sq. m. (85,153 sq.ft.)	
OFFICE AREA @ 25% OF GROSS FLOOR AREA:	= 1,977.7 sq. m. (21,288 sq.ft.)	
LOT WIDTH (min)	40.0m	111.3m
LOT DEPTH (min)	35.0m	131.9m
LOT AREA (min)	8,000 sq.m.	16,029.4 sq.m.
SITE COVERAGE - BUILDINGS (max)	80%	36.5%
FLOOR AREA RATIO (max)	.75	.494
BUILDING HEIGHT (max)	18.0m	10.5m/2 STOREYS
SETBACKS (m)		
FRONT (HIRAM WALKER COURT)	2.0m	12.0m
SIDE (WEST)	0.0m	7.5m
SIDE (EAST)	0.0m	7.4m
REAR (NORTH)	2.0m	8.2m
PARKING	REQUIRED	PROVIDED
GENERAL INDUSTRIAL @ 1.0 - 2.5 STALLS/100 sq.m. x 5,933.0 sq.m. (63,864 sq.ft.)	59 STALLS	70 STALLS
ACCESSORY OFFICES (25%) @ 2.5 - 3.0 STALLS/100 sq.m. x 1,977.7 sq.m. (21,288 sq.ft.)	49 STALLS	58 STALLS
TOTAL REQUIRED =	108 STALLS	128 STALLS
SMALL SIZE PARKING @ 30% MAX	32 STALLS	16 STALLS
ACCESSIBLE PARKING	4 STALLS	4 STALLS
VAN-ACCESSIBLE PARKING	1 STALL	1 STALL
LOADING @ 1/1,900 sq.m. GFA =	6 STALLS	16 STALLS
BICYCLE (LONG TERM) @ 0.05/100 sq.m. GFA x 7,910.7 sq.m. =	4 SPACES	4 SPACES

EASEMENT PLAN KAP65810





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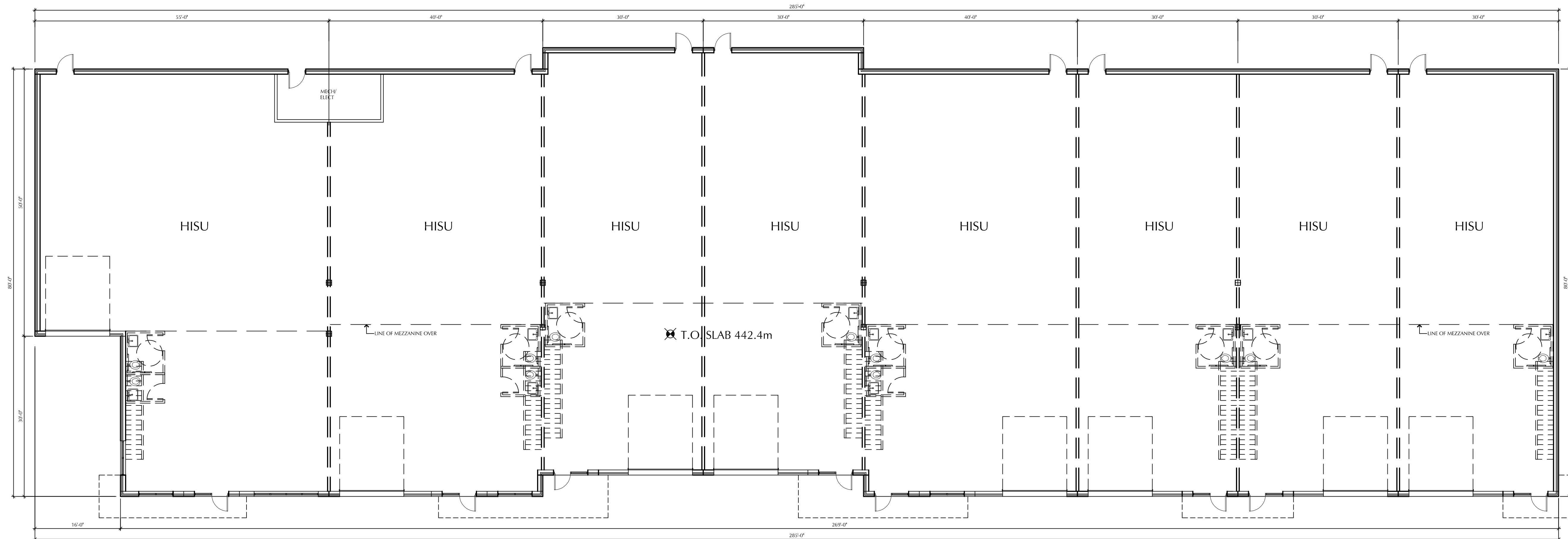
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE
SITE PLAN/ZONING ANALYSIS

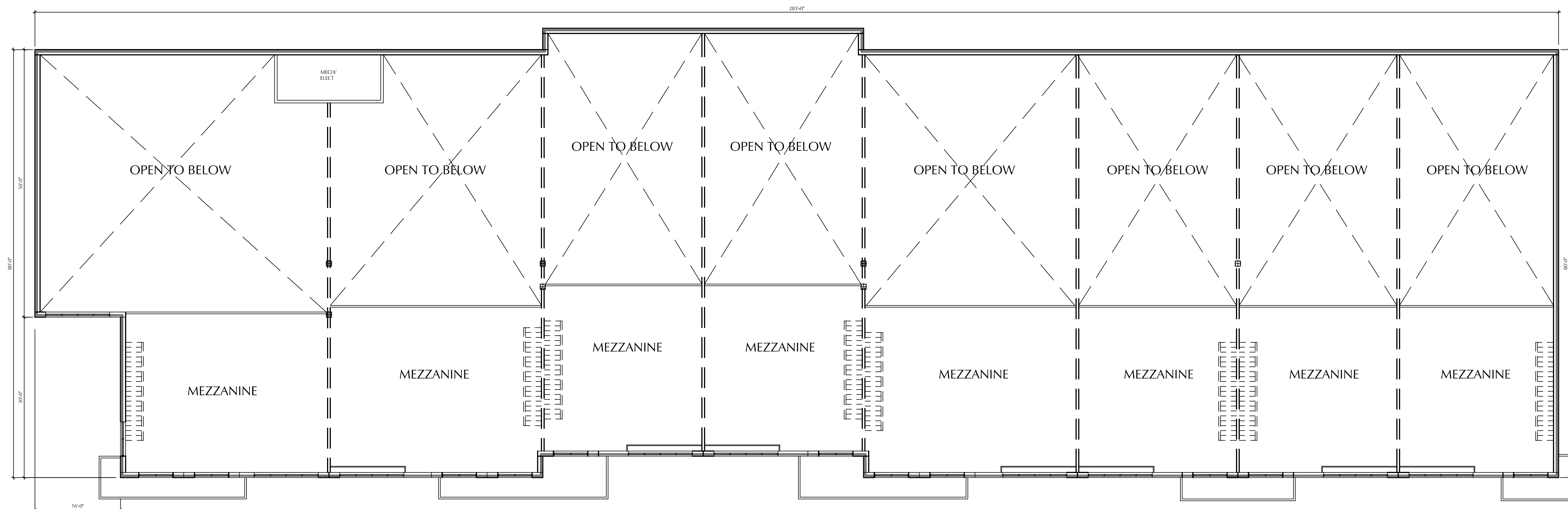


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1	FEB 01/23	REV FOR INITIAL STAFF COMMENTS	DRAWN: HPN
	FEB 13/23	RE-ISSUED FOR DEVELOPMENT PERMIT	Drawing No.

DP1
REVISION No.: 1



MAIN FLOOR PLAN

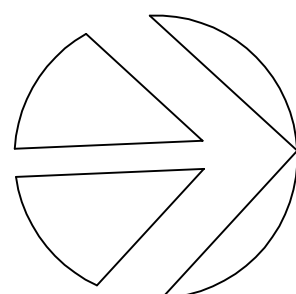


MEZZANINE FLOOR PLAN



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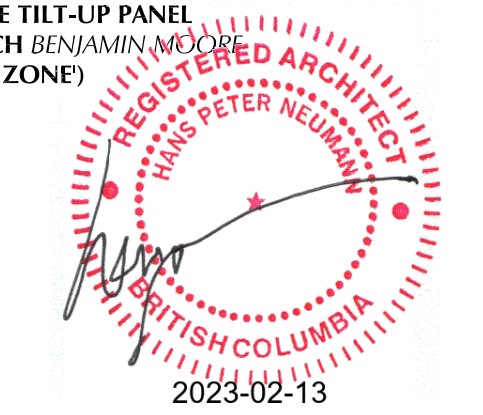
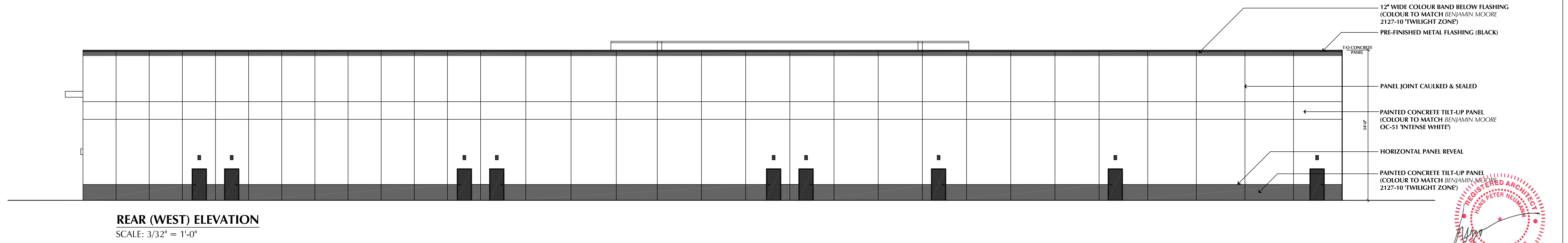
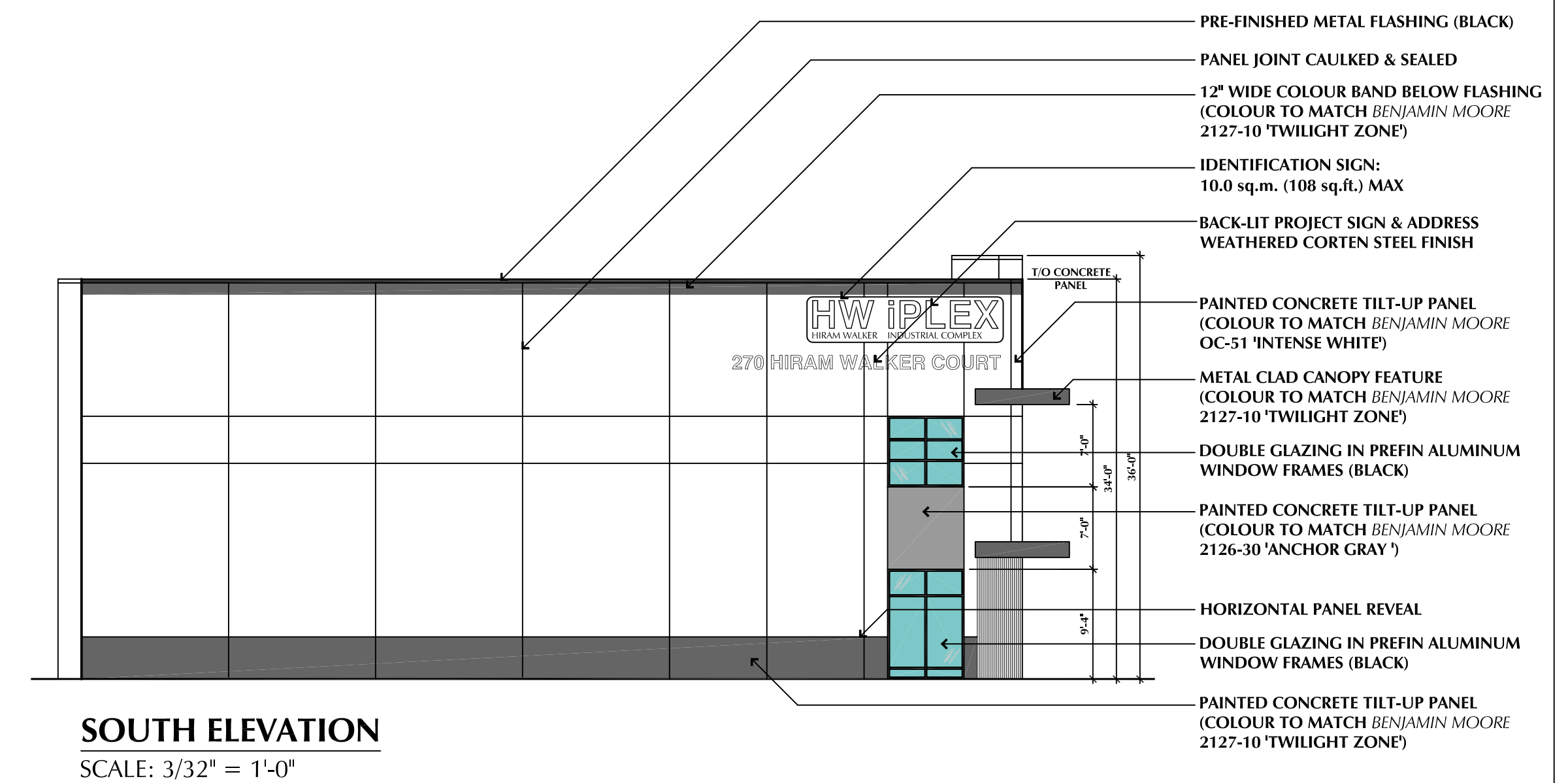
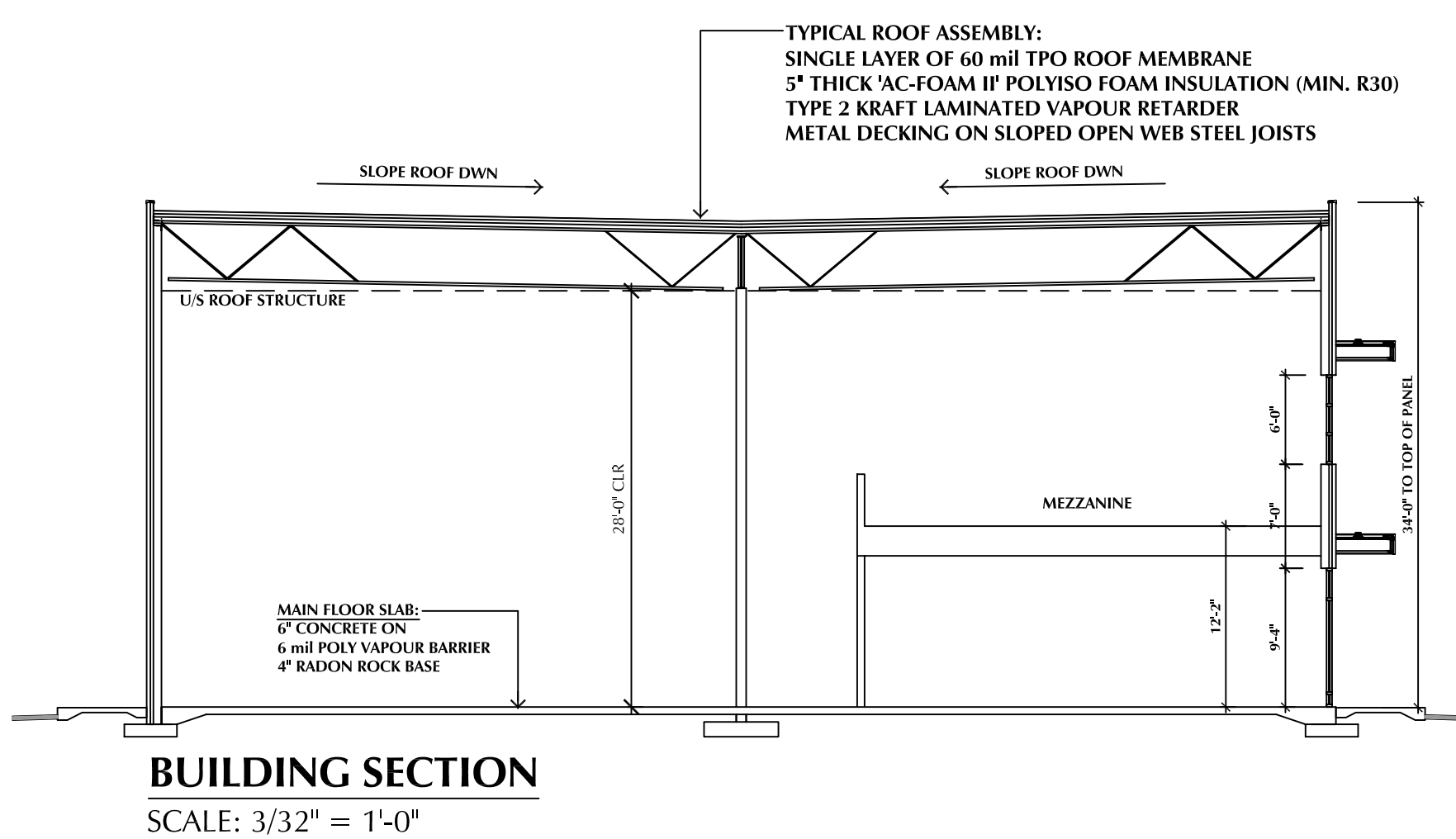
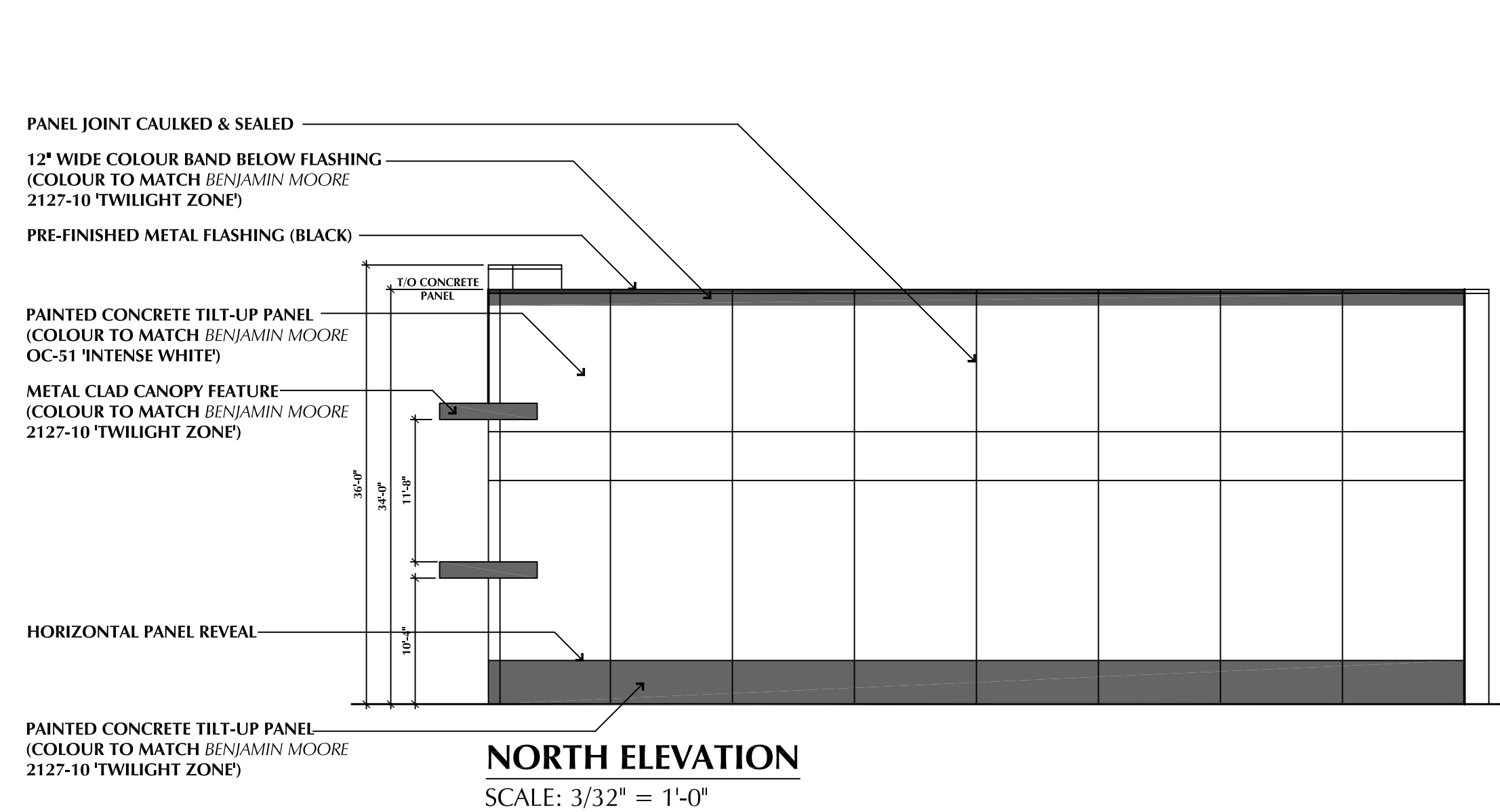
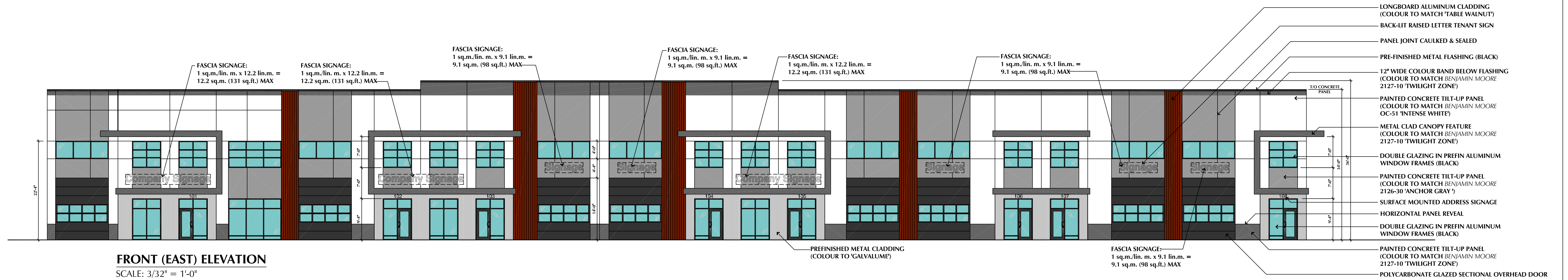
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE

BUILDING 'A' FLOOR PLANS



No.	DATE	DESCRIPTION	SCALE: 3/32" = 1'-0"
	JAN 05/23	ISSUED FOR DEVELOPMENT PERMIT	DATE: OCTOBER 04, 2022
	FEB 08/23	RE-ISSUED FOR DEVELOPMENT PERMIT	DRAWN: HPN
			Drawing No.
			DP2
			REVISION No.:



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PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

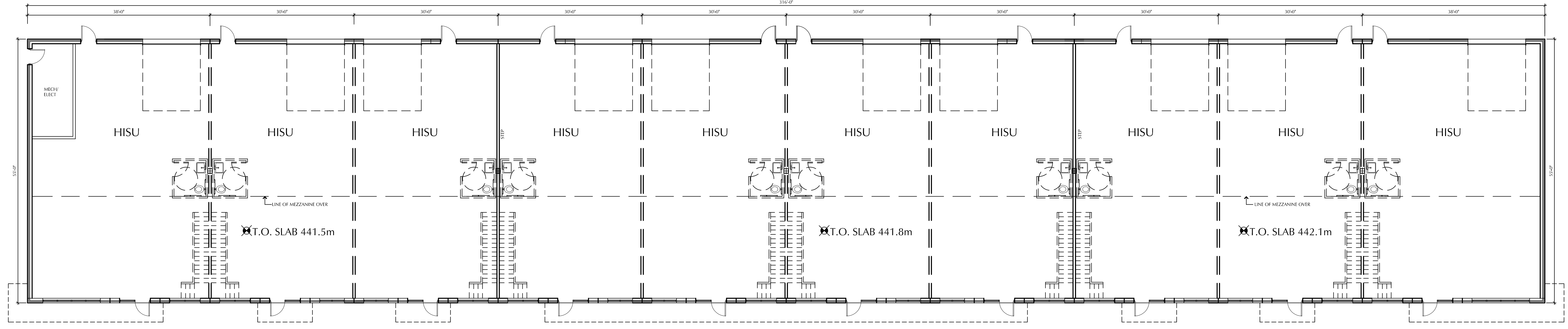
DRAWING TITLE

BUILDING 'A' ELEVATIONS

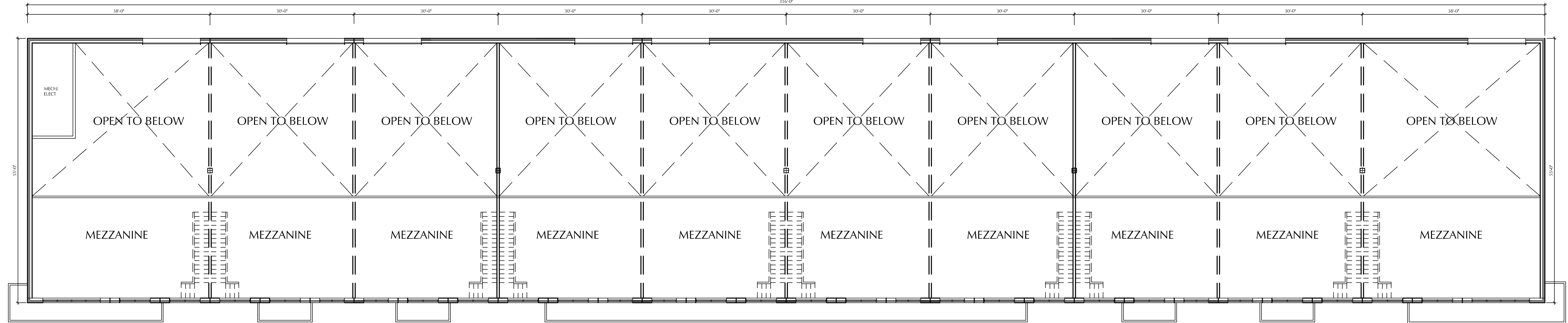


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	JAN 14/23	REV FOR INITIAL STAFF COMMENTS	DRAWN: HPN
	JAN 17/23	RE-ISSUED FOR DEVELOPMENT PERMIT	

DP3
REVISION No.: 1



MAIN FLOOR PLAN

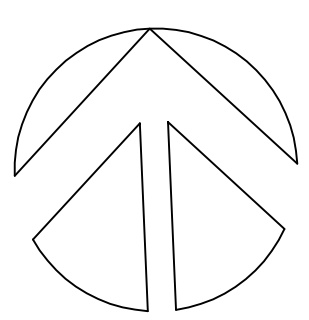


FUTURE MEZZANINE PLAN



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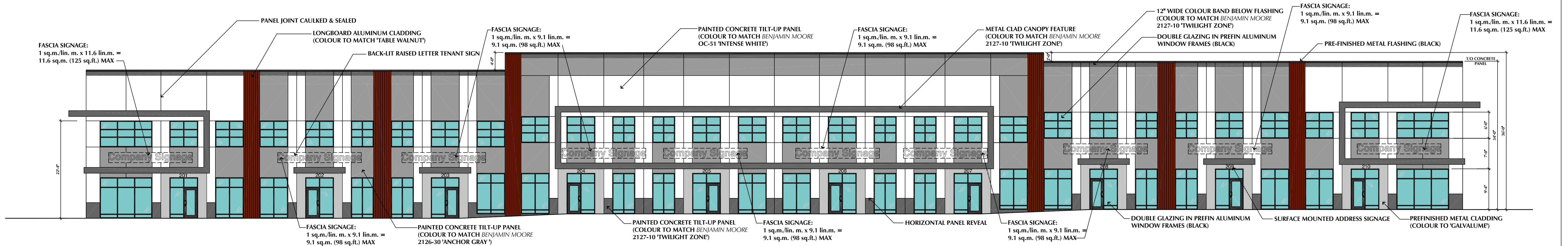
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE

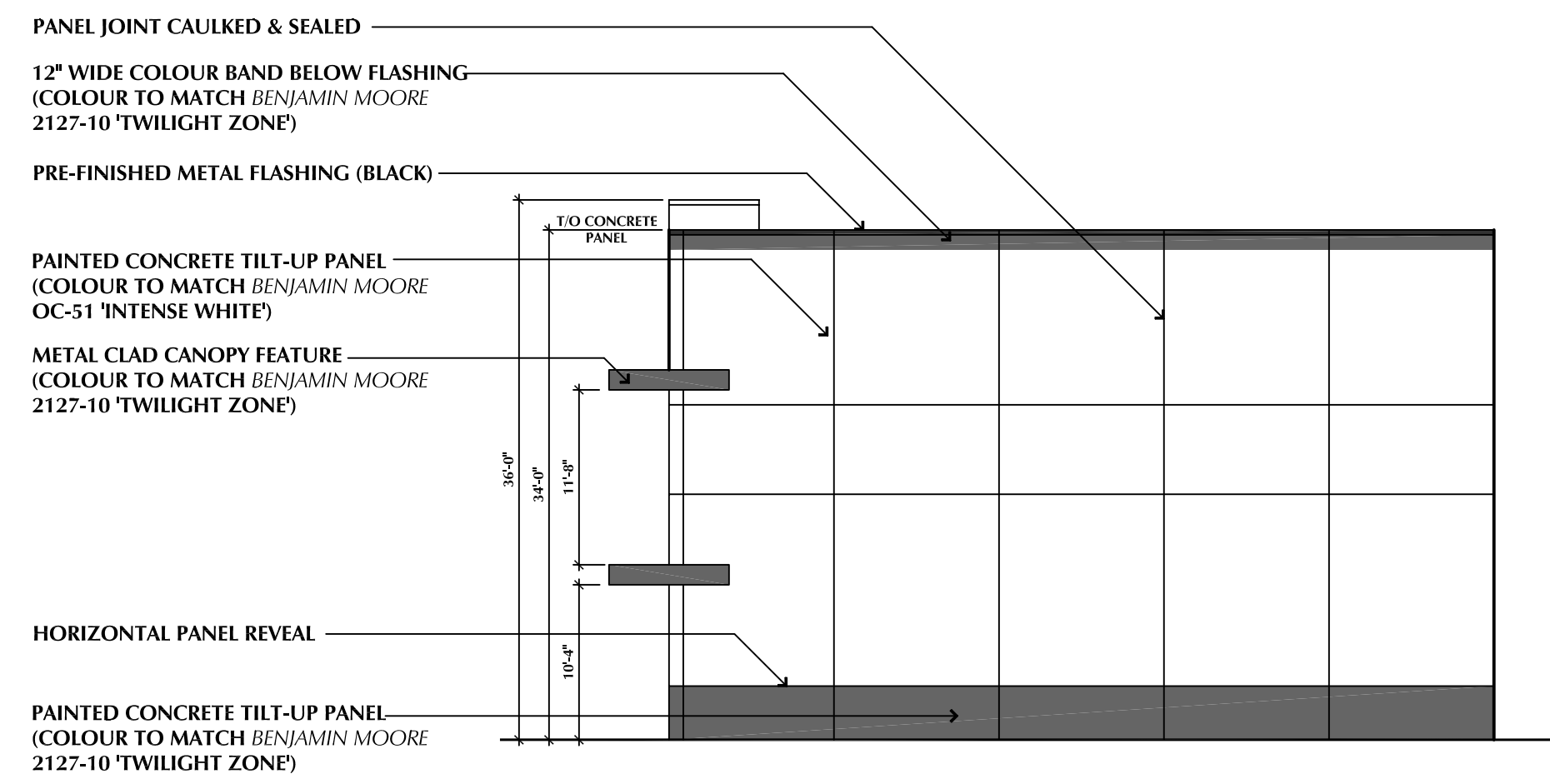
BUILDING 'B' FLOOR PLANS



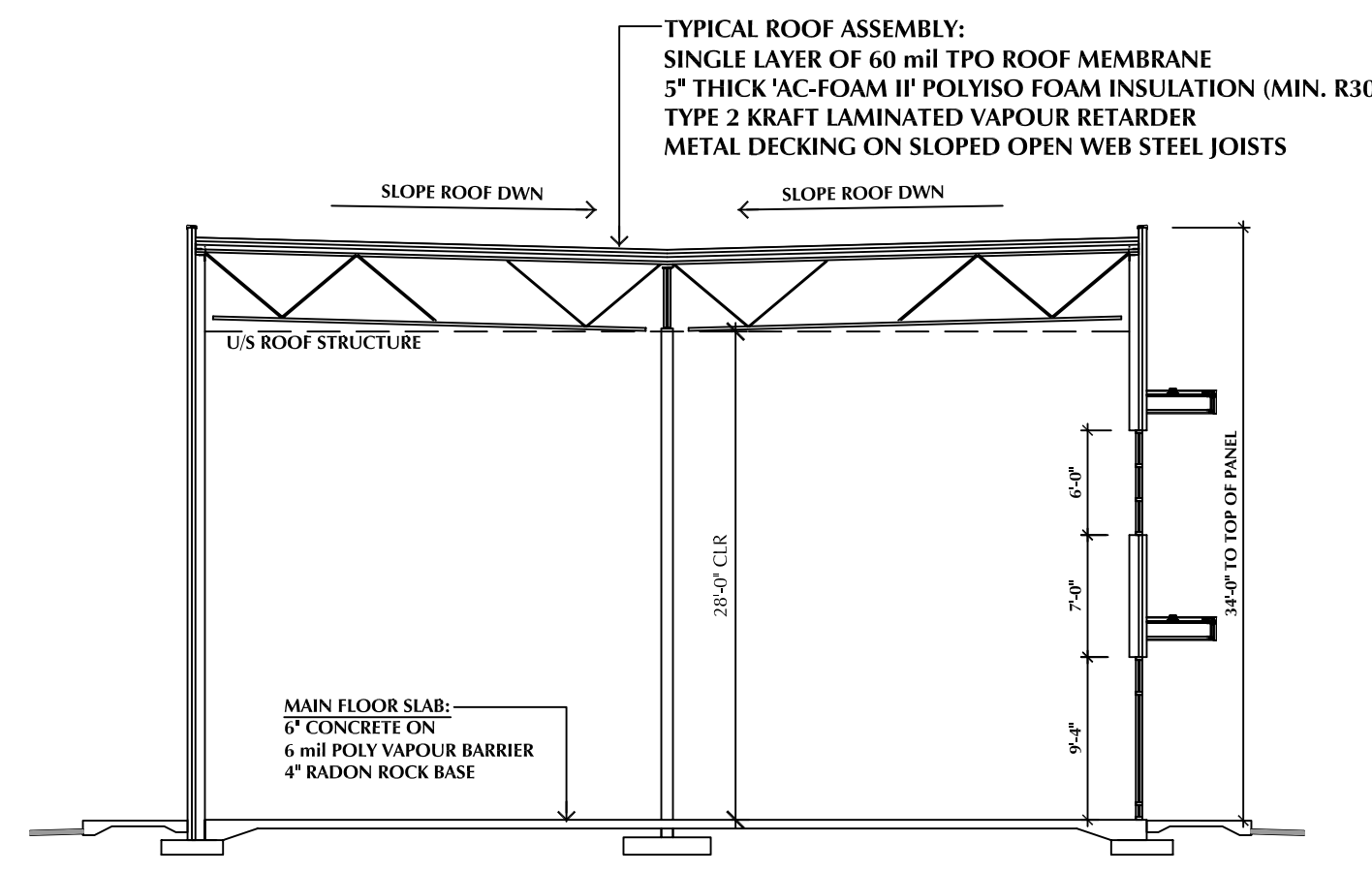
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1	FEB 01/23	REV TO STEP BUILDING FLOOR SLABS	DRAWN: HPN
	FEB 13/23	RE-ISSUED FOR DEVELOPMENT PERMIT	Drawing No.
			DP4
			REVISION No.: 1



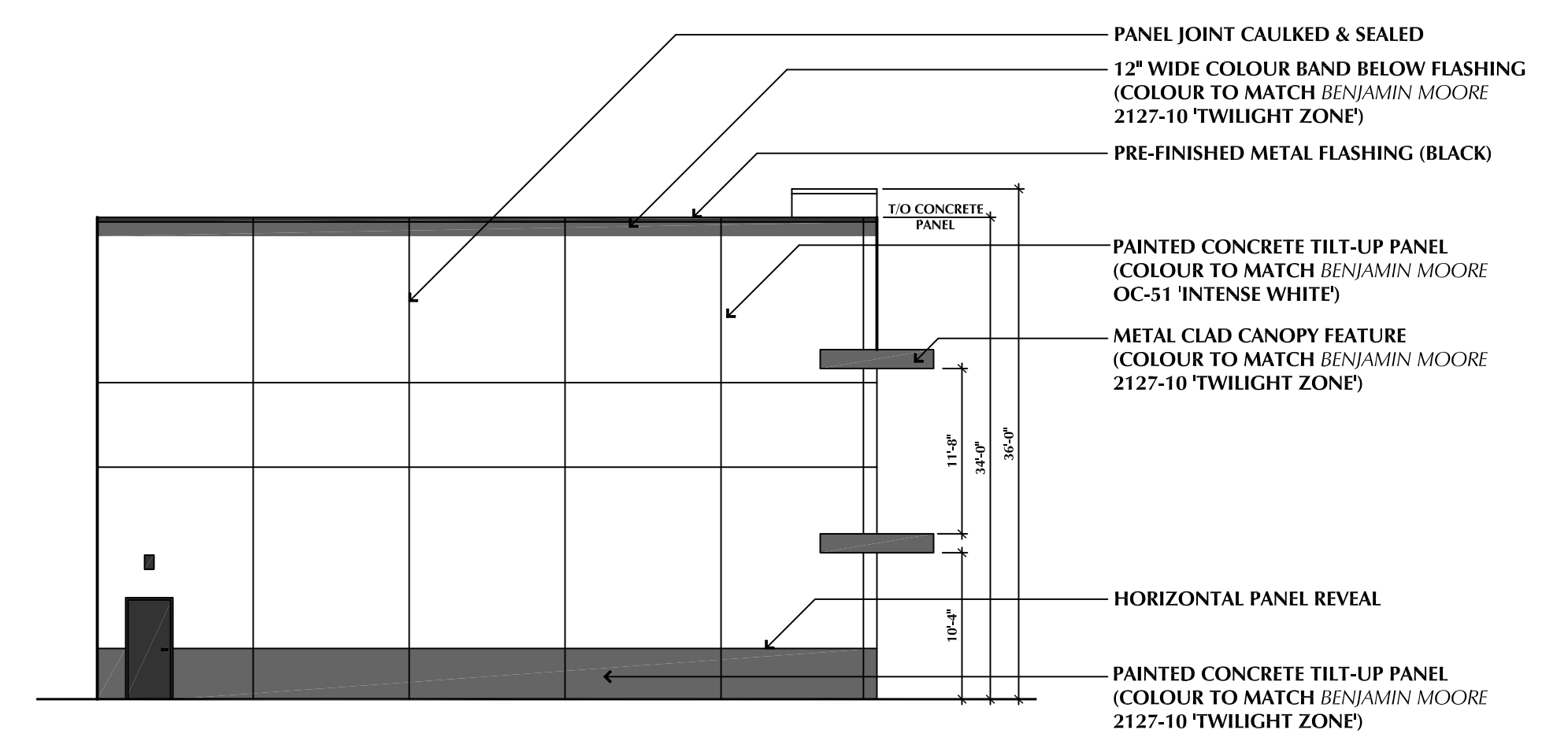
FRONT (SOUTH) ELEVATION
SCALE: 3/32" = 1'-0"



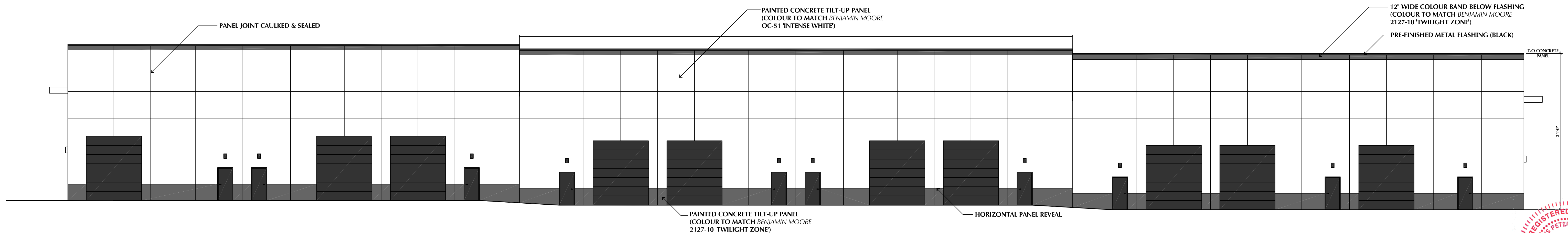
EAST ELEVATION
SCALE: 3/32" = 1'-0"



BUILDING SECTION
SCALE: 3/32" = 1'-0"



WEST ELEVATION
SCALE: 3/32" = 1'-0"

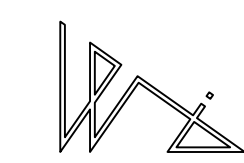


REAR (NORTH) ELEVATION
SCALE: 3/32" = 1'-0"



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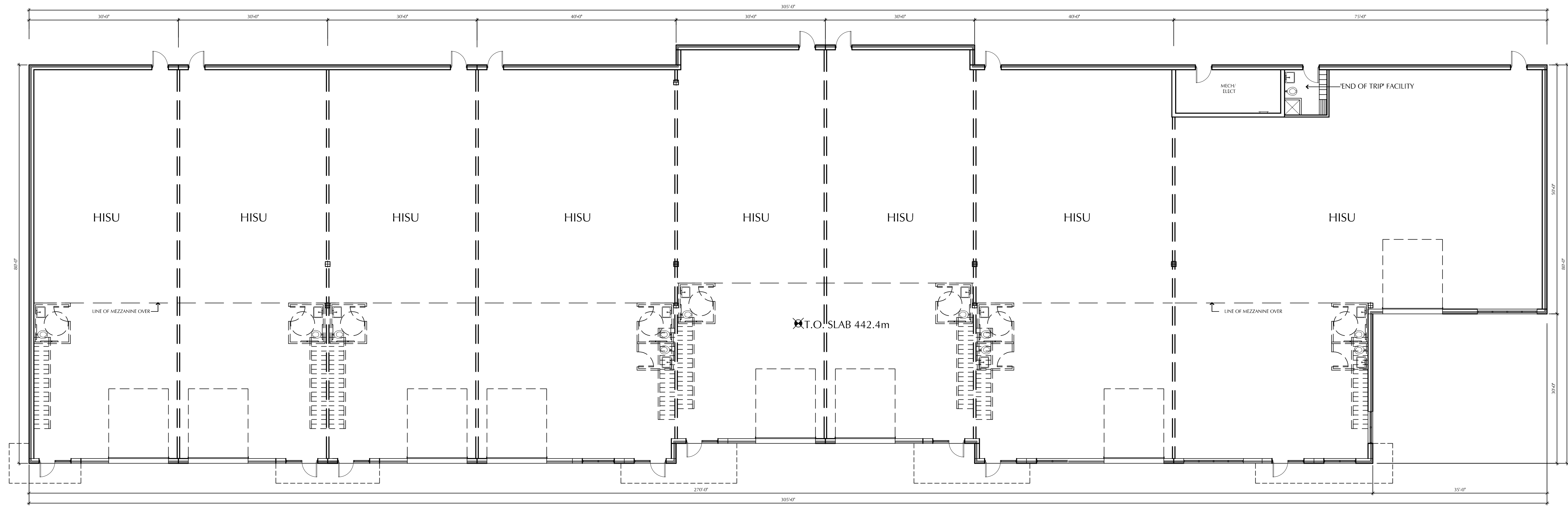
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

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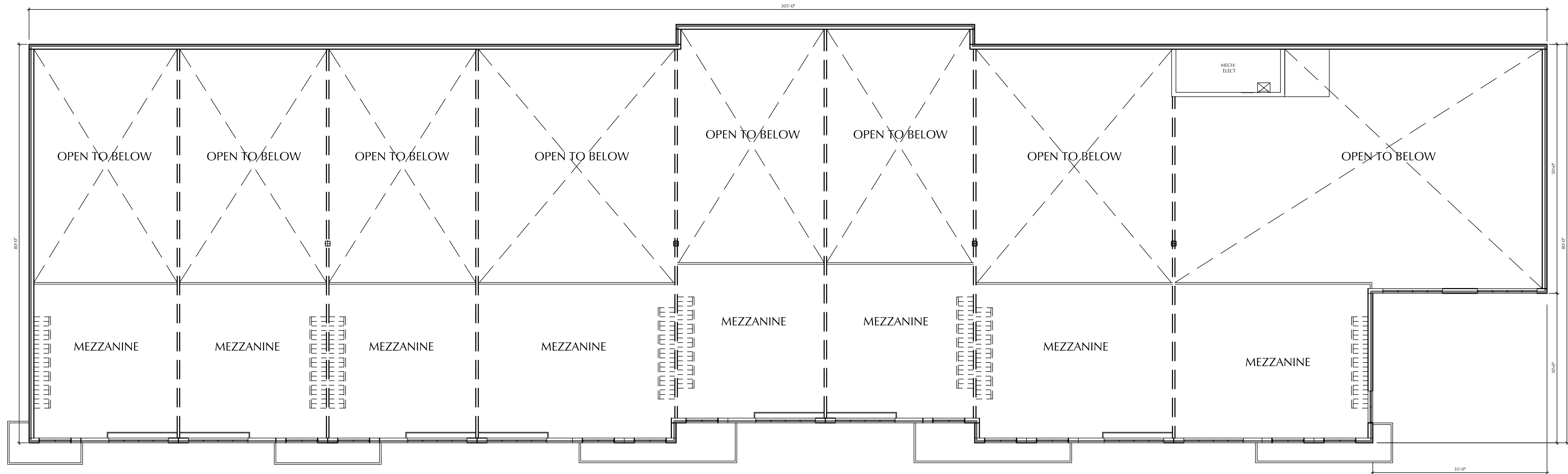
BUILDING 'B' ELEVATIONS



No.	DATE	DESCRIPTION	SCALE: 3/32" = 1'-0"
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1	JAN 14/23	REV FOR INITIAL STAFF COMMENTS	DRAWN: HPN
	FEB 01/23	REV TO STEP BUILDING FLOOR SLABS	Drawing No.
	FEB 08/23	RE-ISSUED FOR DEVELOPMENT PERMIT	DP5
			REVISION No.: 1



MAIN FLOOR PLAN

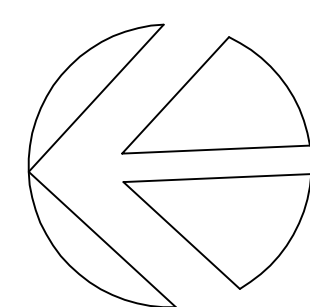


MEZZANINE FLOOR PLAN



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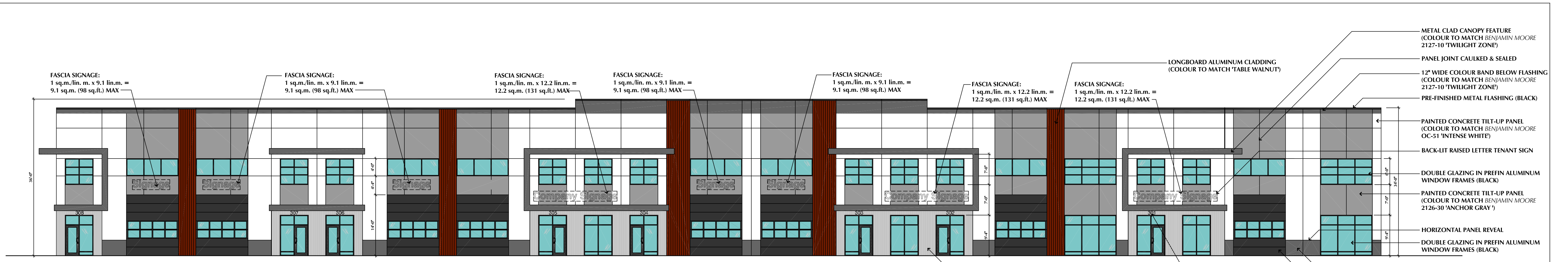
PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE

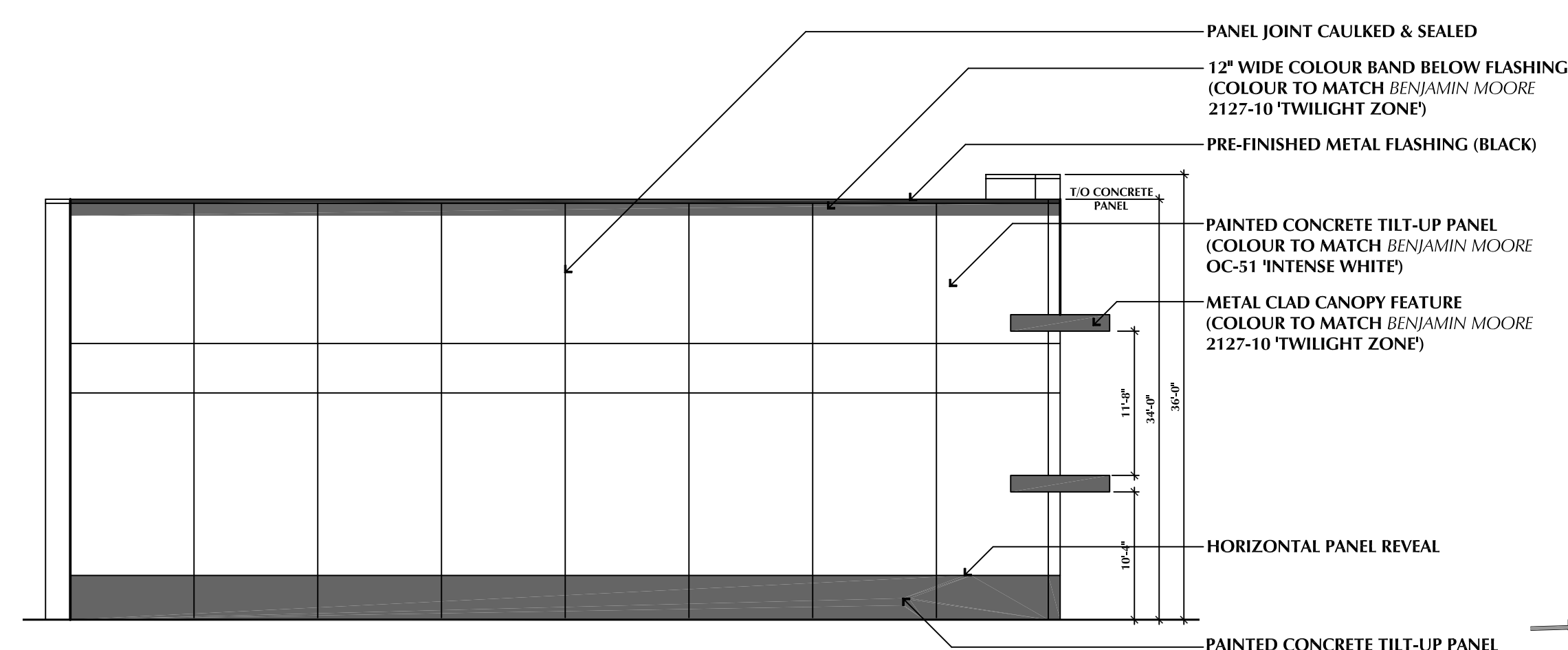
BUILDING 'C' FLOOR PLANS



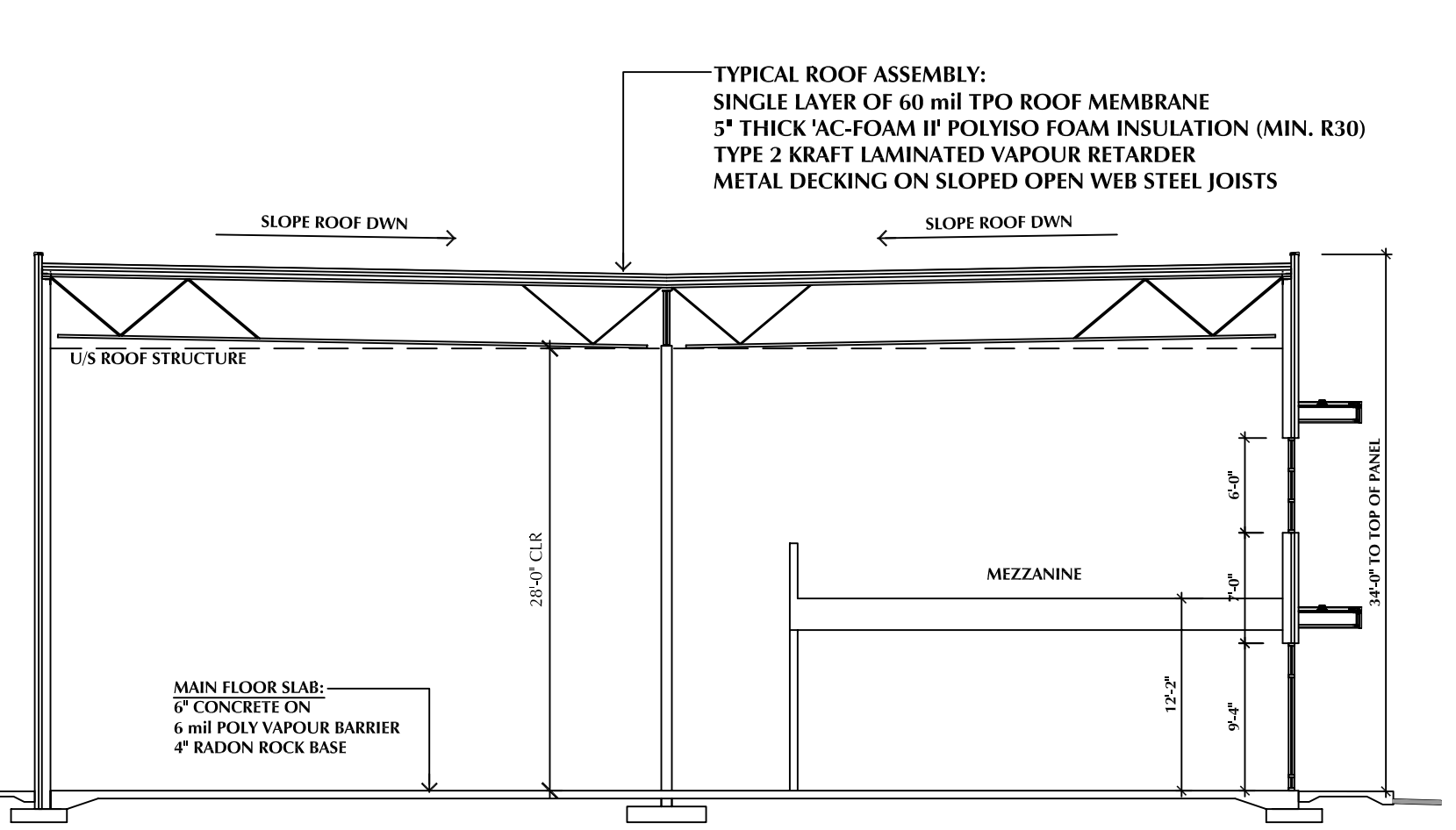
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			Drawing No.
			DP6
			REVISION No.:



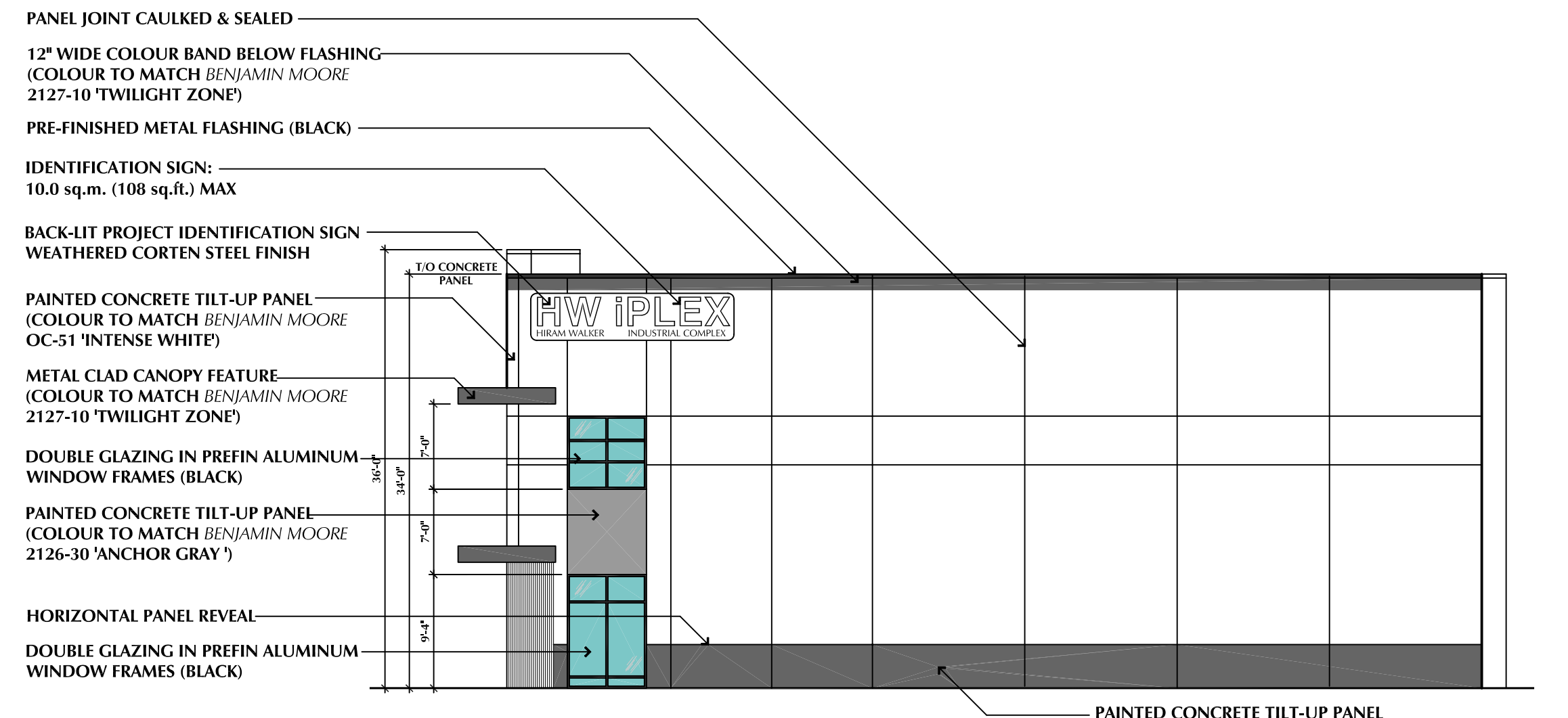
FRONT (WEST) ELEVATION
SCALE: 3/32" = 1'-0"



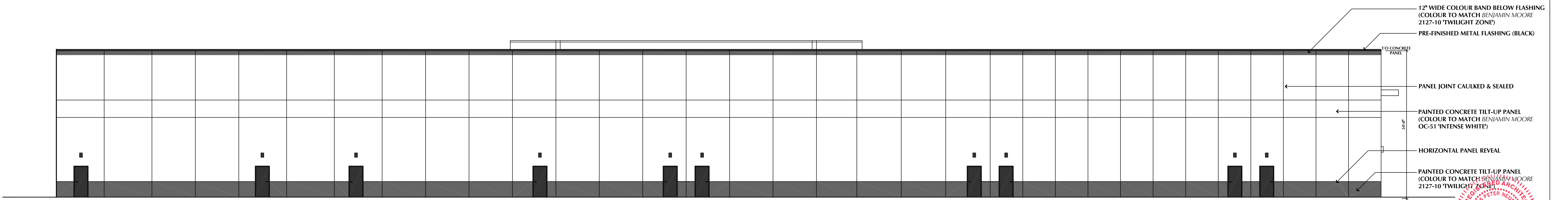
NORTH ELEVATION
SCALE: 3/32" = 1'-0"



BUILDING SECTION
SCALE: 3/32" = 1'-0"



SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



REAR (EAST) ELEVATION
SCALE: 3/32" = 1'-0"

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PROPOSED INDUSTRIAL DEVELOPMENT
270 HIRAM WALKER COURT, KELOWNA, BC

DRAWING TITLE

BUILDING 'C' ELEVATIONS



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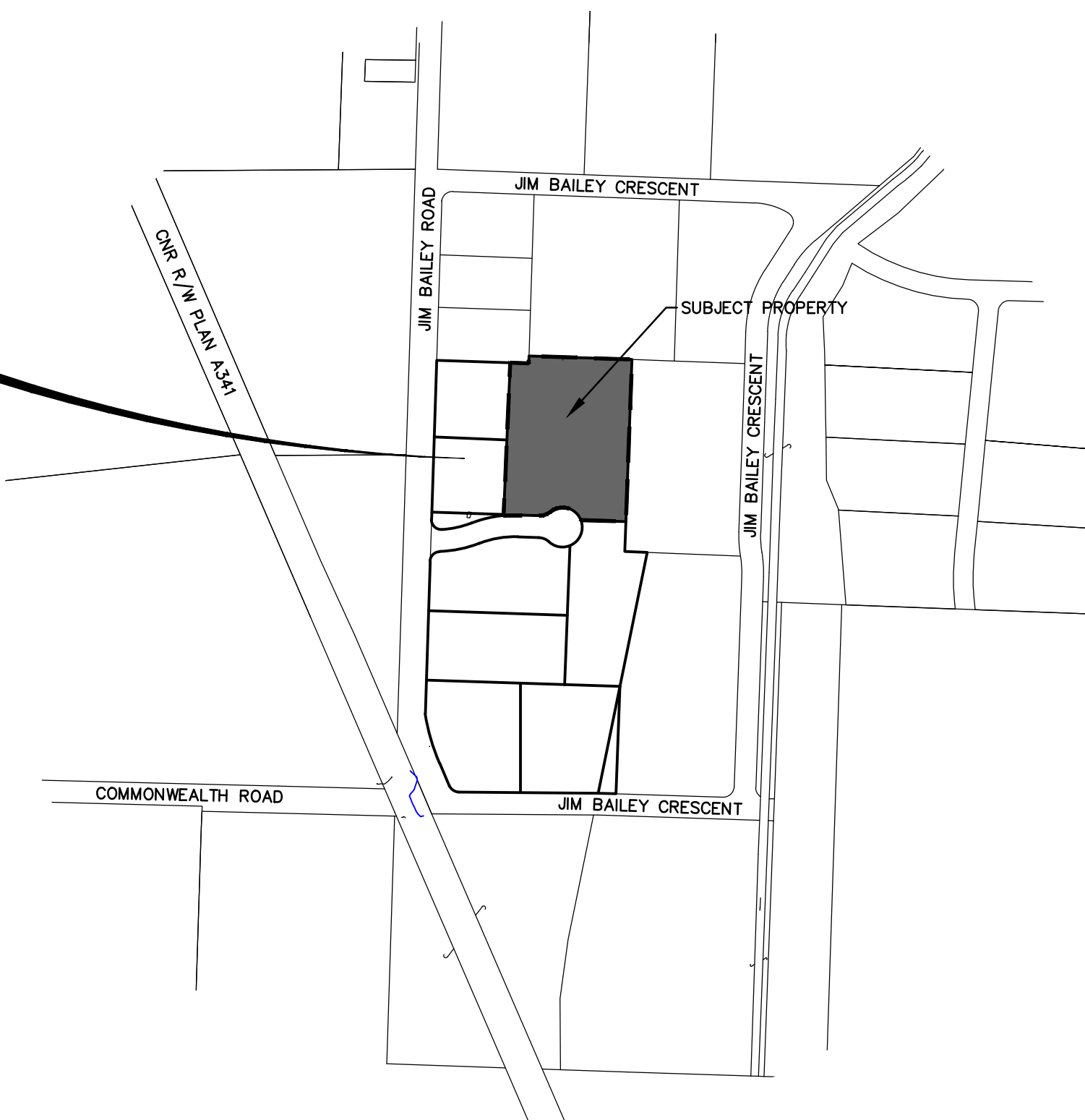
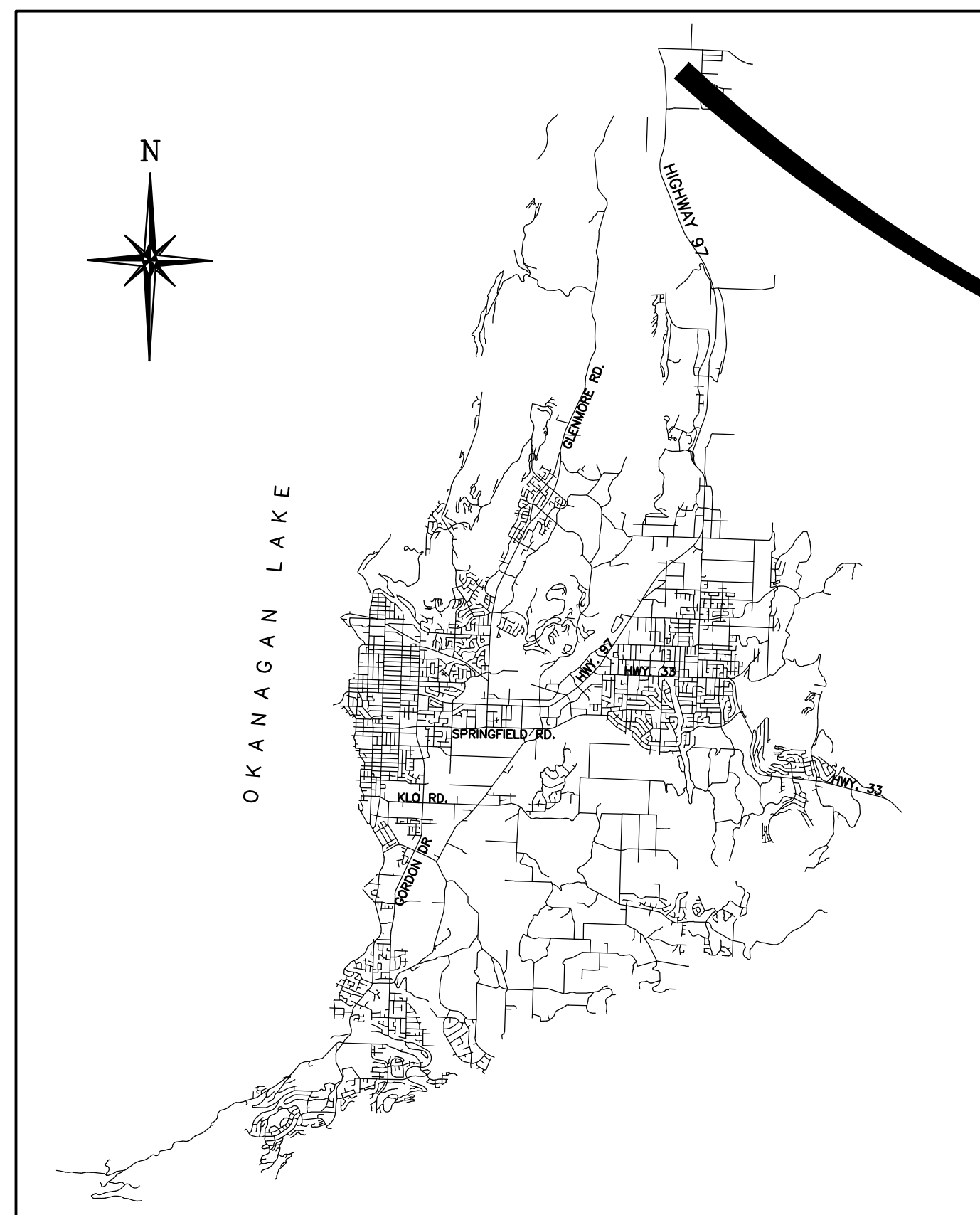
DP7
REVISION No.: 1



270 HIRAM WALKER COURT

KELOWNA, BC,

2022



PRELIMINARY

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL

DRAWING INDEX	
DRAWING NO.	DRAWING DESCRIPTION
22089-P01	SITE SERVICING PLAN
22089-P02	SITE GRADING PLAN
22089-P03	STORM WATER MANAGEMENT PLAN

- GENERAL NOTES**
- THE CONTRACTOR SHALL BE RESPONSIBLE TO LAYOUT WORKS TO THE DESIGN. HE SHALL CONFIRM DIGITAL DATA RECEIVED FROM THE ENGINEER CALIBRATES TO THE DISTANCES AND ELEVATIONS OF THE DESIGN. ACCURACY OF THE DIGITAL INFORMATION IS NOT GUARANTEED. ANY SURFACES IF PROVIDED ARE NOT INTENDED TO BE UTILIZED IN GPS TECHNOLOGY ENABLED CONSTRUCTION EQUIPMENT. THE CONTRACTOR SHALL ENSURE THEY ARE USING THE MOST CURRENT DESIGN DRAWING, APPROVED SHOP DRAWINGS AND FIELD REVISION MEMOS.
- SURVEY LAYOUT**
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THEY ARE WORKING UNDER ALL REGULATORY AND AGENCY PERMITTING DOCUMENTATION PRIOR TO EXCAVATION OF ANY SURFACE INCLUDING BUT NOT EXHAUSTIVE TO THE FOLLOWING:
 - ROAD USE PERMIT WITH THIRD PARTY WORK ORDER TWO DAYS PRIOR TO COMMENCING WORK
 - GROUND WATER DISPOSAL PERMIT AS PUMPING REQUIRES
 - TRAFFIC MANAGEMENT PLAN WITH DETOUR AND PUBLIC NOTIFICATION AS REQUIRED
 - BLASTING USING CERTIFIED SUBCONTRACTOR INCLUDING NOTIFICATION OF NEARBY UTILITIES
 - MMCD STANDARD DRAWINGS AND MUNICIPAL SUPPLEMENTAL DRAWINGS
 - ENVIRONMENTAL SETBACKS AND MONITORING
 - FC DRAWINGS WITH CONFIRMATION OF MOST CURRENT SET.
 - THE CONTRACTOR SHALL CONTRACT THE MUNICIPAL JURISDICTION PRIOR TO CONSTRUCTION TO ENSURE:
 - THEY HAVE THE COMPETENCE TO CONSTRUCT THE WORKS AND EXPERIENCED PERSONNEL TO MANAGE A SAFE WORK SITE
 - THEY OBTAIN THE WORKS OR BUILDING PERMIT APPROPRIATE FOR THE LOCATION AND TYPE OF WORK
 - THEY UNDERSTAND THE NOTIFICATION AND INSPECTION REQUIREMENTS OF THE REGULATING MUNICIPALITY OR DISTRICT
 - THE CONTRACTOR SHALL PRESENT APPLICATION TO CONSTRUCT WORKS WITHIN THE PROPERTY OF THE JURISDICTION/S OF CURRENT OR FUTURE OWNERSHIP OF THE AREA AND INCLUDE WITH THE APPLICATION:
 - INSURANCE POLICY WITH AMOUNT AND INDEMNIFICATION CLAUSE SUITED TO THE MUNICIPAL REQUIREMENTS AND DATED TO CARRY THRU THE CONSTRUCTION PERIOD
 - ASSURANCE OF WCB COMPLIANCE FOR WORKERS AND SUBTRADES AS REQUIRED
- UTILITY LOCATES AND UTILITY DESIGN**
- ANY CONSTRUCTION OF NEW OR REPLACEMENT UTILITY WORKS MUST BE DONE UNDER DIRECT UTILITIES DESIGN AND INSPECTION SUPPLEMENTAL TO CIVIL DRAWINGS AND INSPECTION.
 - THE CONTRACTOR SHALL ACQUAINT THEMSELVES WITH ALL EXISTING UTILITY AND LEGAL WORKS WITHIN THE WORKING AREA TO ENSURE WORKS ARE PROPERLY LOCATED AND REFERENCED TO CORRECT DRAWINGS OR EXPOSED AS NEEDED PRIOR TO EXCAVATION. LOCATION OF WORKS SHOWN ON DESIGN DRAWINGS MUST BE CONFIRMED PRIOR TO COMMENCING CONSTRUCTION:
 - FIELD REVIEW OF EXISTING WORKS SHALL INCLUDE MEASUREMENT TO REFERENCE EXISTING AND LOCATED WORKS TO DESIGN DRAWINGS AND PROPOSED EXCAVATION LIMITS
 - ANY WORKS TO BE TEMPORARILY MOVED MUST BE SURVEYED OR HAVE SETBACK CONTROL TO BE REPLACED TO EXISTING CONDITIONS AND LOCATION
 - ALL UNDERGROUND WORKS ARE TO BE LOCATED BY UTILITY COMPANIES OR BY LOCATE TECHNIQUES CARRIED OUT BY CERTIFIED PERSONNEL AND EQUIPMENT METHODOLOGIES.
 - THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR THE DAMAGE, REPAIR OR REPLACEMENT TO EXISTING WORKS.
 - UTILITY COMPANY DRAWINGS MUST BE REVIEWED TO COMPREHEND THE LOCATION OF WORKS WITH RESPECT TO THE DESIGN DRAWINGS AND ANY RISKS ASSOCIATED WITH CONSTRUCTION DISTURBANCE.
 - ANY LEGAL PINS OR DEMARCATION MUST BE LEFT UNDISTURBED UNLESS FIRST CONTACTING THE ENGINEER TO PROPERLY RECORD ITS REPLACEMENT.
- GEOTECHNICAL CONSIDERATIONS**
- THE CONTRACTOR SHALL COORDINATE WITH THE PROFESSIONAL GEOTECHNICAL ENGINEERING FOR MONITORING SITE CONDITIONS, MATERIALS SELECTION AND TESTING INCLUDING AND NOT LIMITED TO:
 - TRENCH STABILITY AND BACKFILL REQUIREMENTS
 - GRAVEL SIEVE AND COMACTION DENSITY.
 - ASPHALT QUALITY, DENSITY AND THICKNESS.
 - CONCRETE QUALITY AND STRENGTH
 - THE OWNER SHALL PAY FOR THE TESTING REQUIRED AND THE CONTRACTOR FOR THE RETESTING OF FAILED INITIAL TESTS OR REPAIRED WORKS
 - THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL TESTING AND INSPECTION REQUIREMENTS AND PROVIDE NOTICE TO THE GEOTECHNICAL ENGINEER FOR EACH ASPECT OF WORK TO BE TESTED. GEOTECHNICAL INSPECTION OF WORKS SHALL INCLUDE OBSERVATION OF IN-SITU MATERIAL FOR TRENCH REPLACEMENT, OBSERVATION OF IN-SITU SOIL PRIOR TO PLACING ANY FILL THEREON.
 - THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OF ALL SOURCES OF IMPORTED FILL OR GRAVEL MATERIAL WITH ADEQUATE NOTICE TO HAVE THOSE SOILS TESTED (SIEVE AND PROCTOR) FOR PERFORMANCE PRIOR TO PLACEMENT.
- CONSTRUCTION STANDARDS**
- CITY OF KELOWNA BYLAW 7900 APPLICABLE TO OFF-SITE WORKS, PLUMBING CODE APPLICABLE TO ON-SITE WORKS AND THE CURRENT EDITION OF THE IMCD CONTRACT FOR MUNICIPAL INSPECTION 250-470-0490.
- SANITARY SEWER WORKS**
- ALL SEWER WORKS SHALL CONFORM TO STANDARD DRAWINGS OF THE MMCD CONTRACT AND MUNICIPAL SUPPLEMENTS OR TO THE BCBC PART 7 AS SUPERVISED BY A RED SEAL PLUMBER AND INSPECTED BY THE CIVIL ENGINEER.
 - PIPE TO BE INSTALLED TO GRADE AND HORIZONTAL TOLERANCES BY HAND TAMPING SAND BEDDING UNDER THE HAUNCH AND TO THE CROWN OF THE COMPLETE LENGTH OF PIPE AND MACHINE TAMPING BEDDING TO MINIMUM 300mm ABOVE PIPE TO 95% SPD
 - TRENCH BACKFILL ABOVE BEDDING TO BE COMPACTED IN PLACE TO SPECIFICATION SUITED TO CHOSEN MATERIAL TYPE
 - MUNICIPALITIES SHALL BE CONTACTED FOR INSPECTION OR PROCEDURES PRIOR TO CONNECTION TO FUNCTIONAL AND OPERATING MUNICIPAL SYSTEMS
 - UNLESS OTHERWISE SPECIFIED THE SANITARY SERVICES SHALL:
 - BE OF PVC DR 35 PIPE SLOPED AT A MINIMUM OF 1% FOR 150mm.
 - INCLUDE AN INSPECTION MANHOLE AT THE LOCATION SHOWN ON THE DRAWINGS TO CONNECTION TO STREET MAIN.
 - SEWER WORKS SHALL BE TESTED PRIOR TO COMPLETING SURFACE WORKS WITH AIR PRESSURE TESTED TO 5 PSI AND FLUSHED AND VIDEOED.
 - END OF SERVICES TO EXTEND TO WITHIN ONE METER OF BUILDINGS AND BE DEMARKED WITH DEPTH OF SERVICE ON 2.34 M (STUD) MARKER STAKE PAINTED RED/ ORANGE.
 - SERVICES REQUIRING ABANDONMENT SHALL BE DISCONNECTED AND CAPPED AT THE SEWER MAIN UNDER THE SURVEILLANCE OF MUNICIPAL STAFF.
 - ADJUSTABLE MANHOLE CASTINGS ARE TO BE SUPPLIED AND SET ON ALL NEW OR REFURBISHED MANHOLES.
- STORM DRAINAGE WORKS**
- MUNICIPALITIES SHALL BE CONTACTED FOR INSPECTION OR PROCEDURES PRIOR TO CONNECTION TO FUNCTIONAL AND OPERATING MUNICIPAL SYSTEMS.
 - STORM PIPE CAN BE OF GASKETED PVC ULTRA-RIB OR SDR 35 AND CATCH BASIN LEAD PIPE TO BE PVC SDR 35
 - ALL CATCH BASIN LEADS TO BE 200mm FOR SINGLE OR 250mm FOR DOUBLE UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
 - PIPE TO BE INSTALLED TO GRADE AND HORIZONTAL TOLERANCES BY HAND TAMPING SAND BEDDING UNDER THE HAUNCH AND TO THE CROWN OF THE COMPLETE LENGTH OF PIPE AND MACHINE TAMPING BEDDING TO MINIMUM 300mm
- ABOVE PIPE TO 95% SPD**
- TRENCH BACKFILL ABOVE BEDDING TO BE COMPACTED IN PLACE TO GEOTECHNICAL SPECIFICATION SUITED TO CHOSEN MATERIAL TYPE.
 - UNLESS OTHERWISE SPECIFIED THE STORM SERVICES AND MAINS SHALL:
 - BE OF PVC DR 35 PIPE SLOPED AT A MINIMUM OF 0.75% FOR 150mm SIZE AND 0.5% FOR 200mm AND LARGER.
 - BE CONNECTED TO MAINS WITH WYES OR INSERTA TEES AS SPECIFIED.
 - STORM WORKS SHALL BE TESTED PRIOR TO COMPLETING SURFACE WORKS MAINS FLUSHED AND VIDEOED.
 - END OF SERVICES TO EXTEND TO WITHIN ONE METER OF BUILDINGS AND BE DEMARKED WITH DEPTH TO SERVICE ON 2x4 (STUD) MARKER STAKE PAINTED GREEN.
 - ENGINEER TO BE CONTACTED FOR SURVEILLANCE OF WATER TABLE AND EXPOSED SOIL UPON EXCAVATION OF EACH DRYWELL TO ADJUST TO CONDITIONS.
 - ALL DRYWELLS SHALL BE PLACED A MINIMUM OF 5m AWAY FROM ANY EXISTING OR PROPOSED BUILDINGS OR RETAINING WALLS.
 - DRAIN ROCK FOR PERFORATED STORM INFILTRATION TRENCH AND COBBLE FOR DRYWELL INFILTRATION TO BE COMPLETELY CONTAINED IN GEOFABRIC CLOTH WRAP WITH OVERLAPS TO PREVENT MIGRATION OF FINES TO ROCK VOIDS.
 - PERFORATED PIPE INSTALLATION TO COX DRAWINGS SS-S53.
 - ADJUSTABLE MANHOLE CASTINGS ARE TO BE SUPPLIED AND SET ON ALL NEW OR REFURBISHED MANHOLES.
 - SET CATCH BASIN GRATES 40mm LOWER THAN ASPHALT GRADE
 - ALL CATCH BASINS TO BE MINIMUM VOLUME OF ROUND 1m DIA X 1.5m DEPTH AND WITH TRAPPING HOOD ON DISCHARGE LEAD TO ENCOURAGE TREATMENT OF SURFACE RUNOFF.
 - ALL CATCHBASIN LEADS SHALL BE 200mm DIAMETER SDR 28 AT 2% MINIMUM SLOPE FOR SINGLE CATCHBASINS AND 250mm DIAMETER SDR 28 AT 2% MINIMUM FOR DOUBLE CATCHBASINS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- WATER WORKS**
- CONTRACTOR TO NOTIFY CITY STAFF OF CONSTRUCTION SCHEDULE AND FOR PRECONSTRUCTION MEETING FOR:
 - ASSESSMENT OF INSPECTION REQUIREMENTS.
 - CORROSION PROTECTION REQUIREMENTS.
 - DISINFECTION PROCEDURES AND TESTING / SAMPLING WITNESS.
 - WATERMAIN INSTALLATION TO MAINTAIN 3.0m HORIZONTAL AND 0.45m VERTICAL SEPARATION FROM ALL SANITARY AND STORM MAINS AND MAINTAIN 1.5m FROST COVER.
 - PIPE TO BE INSTALLED TO GRADE AND HORIZONTAL TOLERANCES BY HAND TAMPING SAND BEDDING UNDER THE HAUNCH AND TO THE CROWN OF THE COMPLETE LENGTH OF PIPE AND MACHINE TAMPING BEDDING TO MINIMUM 300mm ABOVE PIPE TO 95% SPD
 - TRENCH BACKFILL ABOVE BEDDING TO BE COMPACTED IN PLACE TO GEOTECHNICAL SPECIFICATION SUITED TO CHOSEN MATERIAL TYPE.
 - WATER SERVICE SHUTOFF VALVES TO BE ACCESSIBLE WITH EITHER CURB STOPS OR NELSON BOXES ADJUSTED TO FINISH GRADES.
 - END OF SERVICES TO EXTEND TO WITHIN ONE METER OF BUILDINGS AND BE DEMARKED WITH DEPTH TO SERVICE ON 2x4 (STUD) MARKER STAKE PAINTED BLUE.
 - WATERMANS TO BE DISINFECTED TO AWWA C651 14 AND PRESSURE TESTED TO MMCD CLAUSES. AT A MINIMUM, MAINS SHALL BE TESTED TO 1.5 X WORKING PRESSURE OR 200 PSI, WHICHEVER IS GREATER, OR AS OTHERWISE DIRECTED BY ENGINEER.
 - USE PIPE MATERIALS SPECIFIED ON DESIGN DRAWINGS OR ALTERNATIVES AS APPROVED AND DIRECTED BY ENGINEER AND APPROVING AUTHORITY.
 - CONTRACTOR TO EXERCISE CONTROL WHEN INSERTING SPOUT TO BELL PIPE CONNECTIONS BY USING INSERTION MARKS. RESTRAIN JOINTS OR EXPOSE DOWNSTREAM CONNECTIONS AS WITNESSED BY INSPECTION, TO ASSURE CONNECTION AND PREVENTION OF OVER OR UNDER INSERTION.
 - PROVIDE MANUFACTURERS SPECIFICATION FOR DEFLECTION TOLERANCES TO ENGINEER TO CONFIRM ANY PIPE CURVATURE OR DEFLECTION OF JOINTS USED.
- SURFACE WORKS**
- ALL MANHOLE CASTINGS, NELSON BOXES AND COVERS WITHIN PAVED AREAS MUST BE SET TO CROSSFALL AND GRADE OF ROAD TO BE LEVEL OR WITHIN 5mm OF THE ROAD FINISH.
 - ANY EXISTING MANHOLES ENCOUNTERED WITHIN THE WORK ZONE SHALL HAVE THE TOP SLAB, FRAME AND GRATE UPGRADED TO THE CURRENT CITY STANDARDS.
 - FOR NEW CURBS PLACED ALONG EXISTING REUSED ASPHALT SURFACE, THE ENGINEER SHALL BE ON-SITE TO INSPECT AND ADJUST CURB ELEVATION AND GRADE OR ASPHALT REMOVAL TO ACCOMMODATE BEST SURFACE INFILL
 - STRING LINES OR CONTROL FOR PLACEMENT OF CONCRETE CURBING AND/OR SIDEWALKS TO BE INSPECTED BY ENGINEER PRIOR TO POURING CONCRETE
 - CONTRACTOR TO PROVIDE ADEQUATE OR MINIMUM 48 HR NOTICE TO ENGINEER FOR INSPECTION
 - ROAD SUBBASE MATERIALS AND THICKNESSES SHALL BE CHOSEN APPROPRIATE TO THE TRAFFIC LOADS AND TO STRENGTH (CBR) OF UNDERLYING SUBGRADE
 - CONTRACTOR TO BE RESPONSIBLE FOR SCHEDULING OF WORKS TO ENSURE ADEQUATE WEATHER CONDITIONS AT THE TIME OF PLACING ROAD BASE AND SURFACE TREATMENT (ASPHALT)
 - BASE GRAVELS TO BE COMPACTED TO MINIMUM 95% MPD WITH CONSIDERATION OF MOISTURE AND TEMPERATURE PRIOR TO PLACEMENT OF SURFACE TREATMENT
 - AFTER ANY FROST OR WET CONDITIONS PRECEDING ASPHALT PLACEMENT, A FINAL MEASUREMENT OF CONDITIONS AND WRITTEN CONFIRMATION FROM GEOTECH FOR PLACEMENT OF SURFACE TREATMENT IS RECOMMENDED.
 - ROAD RESTORATION TO BE CONSTRUCTED TO COX SUPPLEMENTAL SECTION 31 23 015 7.5.1 TO 7.5.9
- CITY OF KELOWNA STANDARD DRAWINGS**
- GENERAL DETAILS**
- SS-G4 UTILITY TRENCH
 - SS-G5 PAVEMENT RESTORATION
- STORM AND SANITARY SEWERS**
- SS-S1A STANDARD AND SUMP MANHOLES
 - SS-S1B MANHOLE FRAME AND COVER
 - SS-S11A,B&C CATCH BASIN (900mm Ø)
 - SS-S51 DRAINAGE DRYWELL
 - SS-S52 DRAINAGE DRYWELL INSTALLATION
 - SS-S53 PIPE PERFORATION AND BEDDING DETAIL FOR GROUND WATER RECHARGE
 - STD. SS-S54 CATCH BASIN TRAPPING HOOD
- CONCRETE**
- SS-C7 DRIVEWAY CROSSING FOR BARRIER CURBS
- MMCD STANDARD DRAWINGS**
- CONCRETE AND MISCELLANEOUS DETAILS**
- STD. C2 CONCRETE SIDEWALK AND BARRIER CURBS
 - STD. C4 CONCRETE CURBS - NARROW BASE
 - STD. C9 WHEELCHAIR RAMP FOR SIDEWALK AND BARRIER CURBS

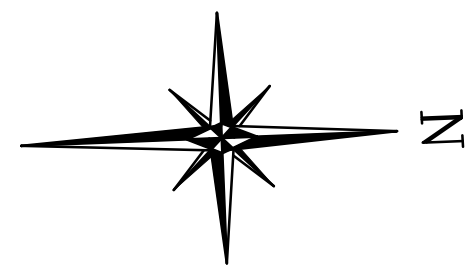
PROTECH CONSULTING LTD.
 300 - 3275 Lakeshore Road, Kelowna B.C. Phone 860-1771
 PERMIT TO PRACTICE 1001403

CIVIC ADDRESS:
 270 HIRAM WALKER COURT

LEGAL DESCRIPTION:
 PLAN EPP98124, LOT 3, SEC 2, TWP 20, O.D.Y.D.

Protech File: 22089
City File: ????????

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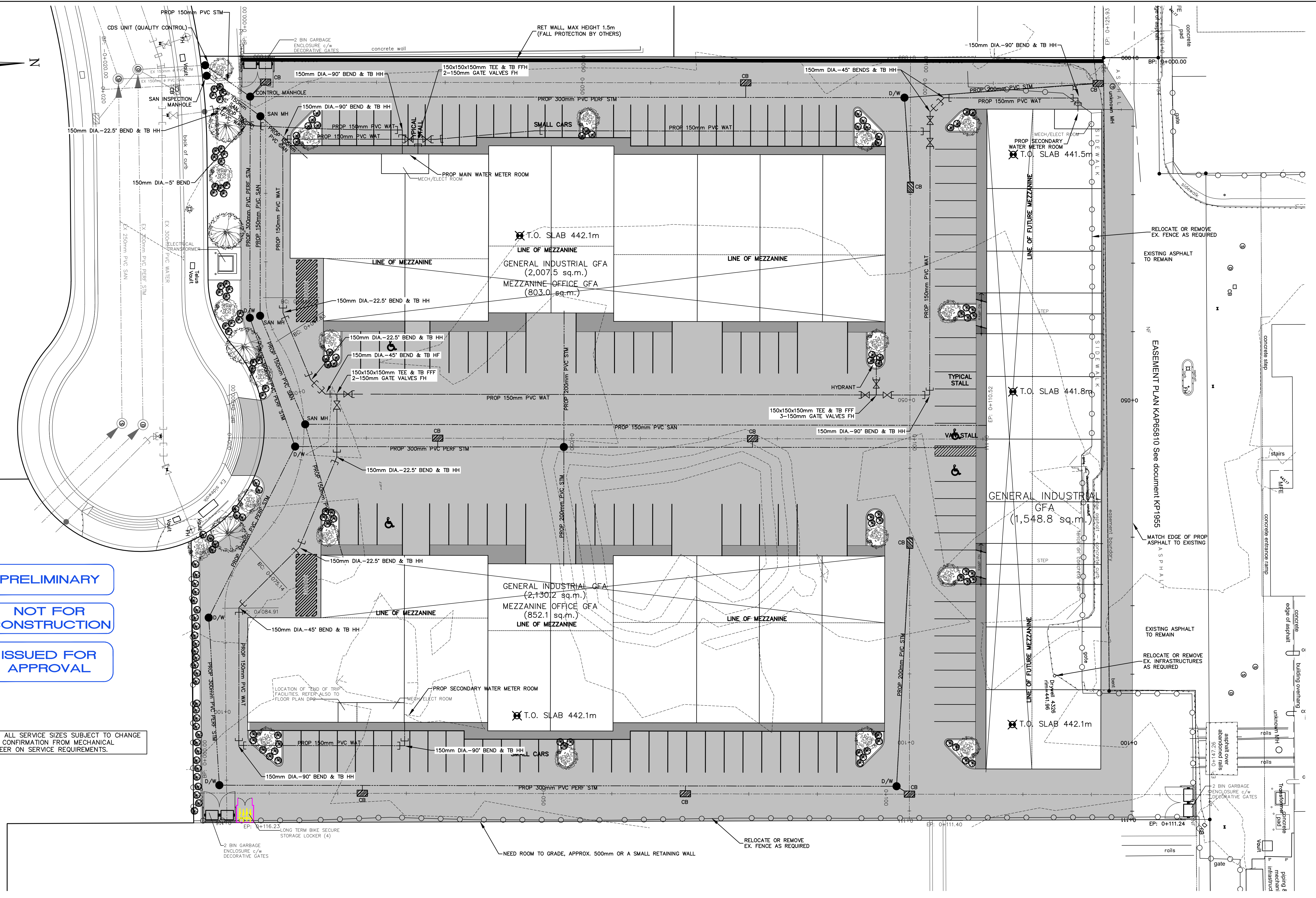


PRELIMINARY

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ISSUED FOR APPROVAL

NOTE: ALL SERVICE SIZES SUBJECT TO CHANGE UPON CONFIRMATION FROM MECHANICAL ENGINEER ON SERVICE REQUIREMENTS.



LEGEND	
WATER	EX. MANHOLE ○ MH #
SAN. SEWER	PROP. MANHOLE ● MH #
STORM SEWER	POWER POLE ● P.P.
GAS	LAMP STANDARD □ L.S.
U/G UTILITY (ALIGNMENT)	CATCH BASIN □ C.B.
	HYDRANT ● HD
	SURVEY MONUMENT ●
	WATER CURB STOP ●
	SANITARY INSPECTION CHAMBER ●
	STORM INSPECTION CHAMBER ●
	TRANSFORMER - POWER ●
	SERVICE BOX ●

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PERMIT TO PRACTICE NO.: 1001403

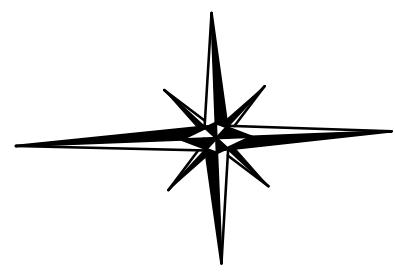
NO.	DATE	BY	REVISION	CH/KD
2	2023-02-08	RSB	RE-ISSUED FOR DEVELOPMENT PERMIT	KCL
1	2022-12-22	RSB	ISSUED FOR DEVELOPMENT PERMIT	KCL

DRAWN	RSB
DESIGN	RSB
APPROVED	KCL
DATE	DEC 2022
SCALE	
HORIZ.	1:250
VERT.	N/A

THE CITY OF KELOWNA
ENGINEERING DEPARTMENT

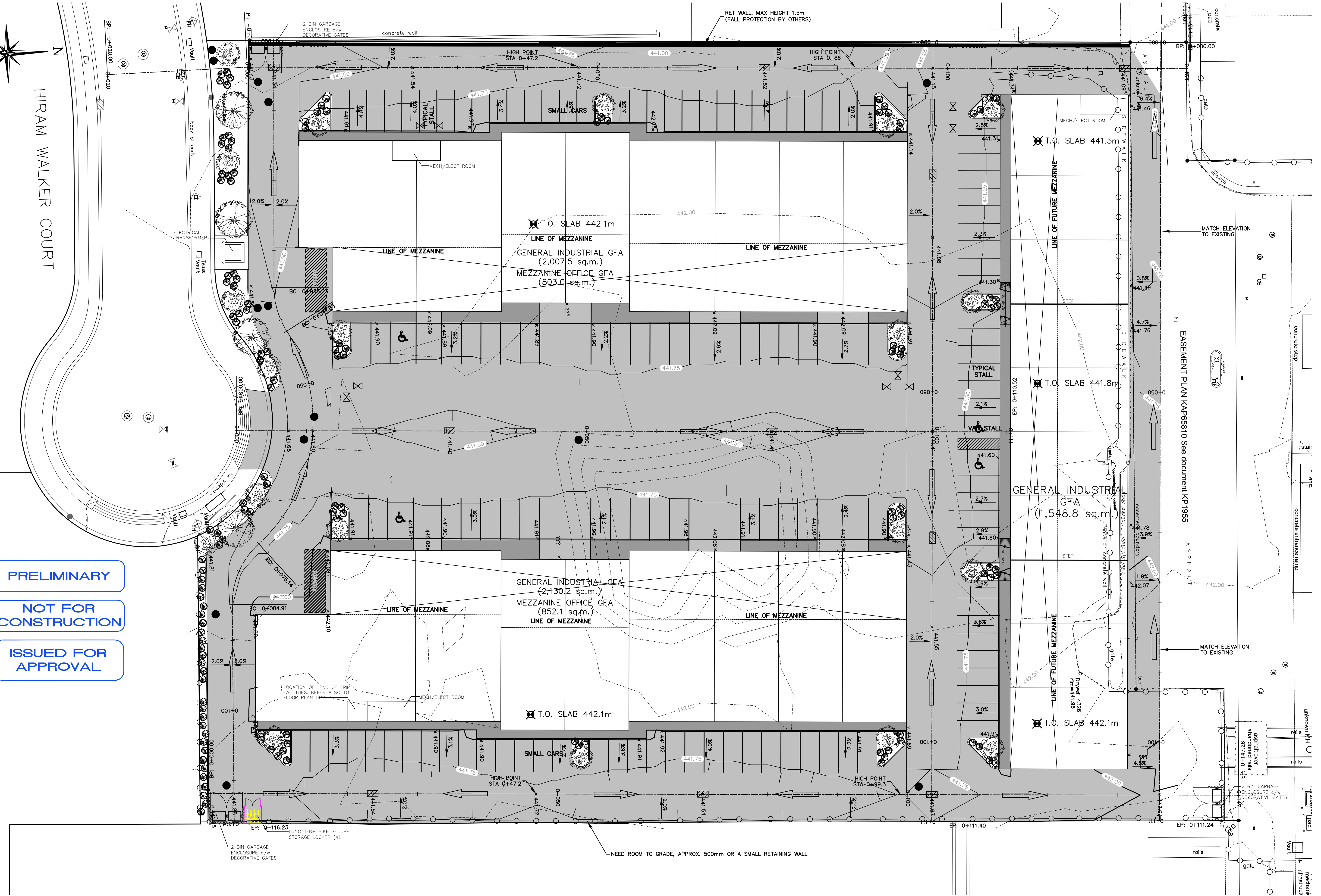
PROPOSED HEAVY INDUSTRIAL BUILDINGS
270 HIRAM WALKER COURT
SITE SERVICING PLAN

DIVISION	
DRAWING NO.	REV. NO.
22089-P01	2



HIRAM WALKER COURT

PRELIMINARY
NOT FOR CONSTRUCTION
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EASEMENT PLAN KAP65810 See document KP1955

LEGEND	
WATER	EX. MANHOLE ○ MH #
SAN. SEWER	PROP. MANHOLE ● MH #
STORM SEWER	POWER POLE ● P.P.
GAS	LAMP STANDARD XLS.
U/G UTILITY (ALIGNMENT)	CATCH BASIN □ CB
	HYDRANT ⊕ HD
	SURVEY MONUMENT ⊙
	OG CONTOURS (1m INTERVAL)
	FG CONTOURS (1m INTERVAL)
	WATER CURB STOP
	SANITARY INSPECTION CHAMBER
	STORM INSPECTION CHAMBER
	TRANSFORMER - POWER
	SERVICE BOX

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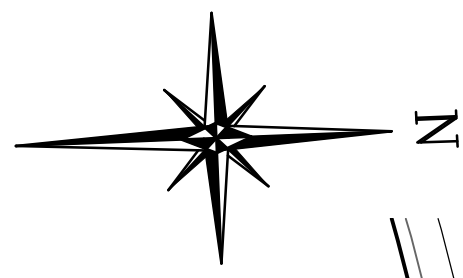
NO.	DATE	BY	REVISION	CHKD
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DRAWN	RSB
DESIGN	RSB
APPROVED	KCL
DATE	DEC 2022
SCALE	
HORIZ.	1:250
VERT.	N/A

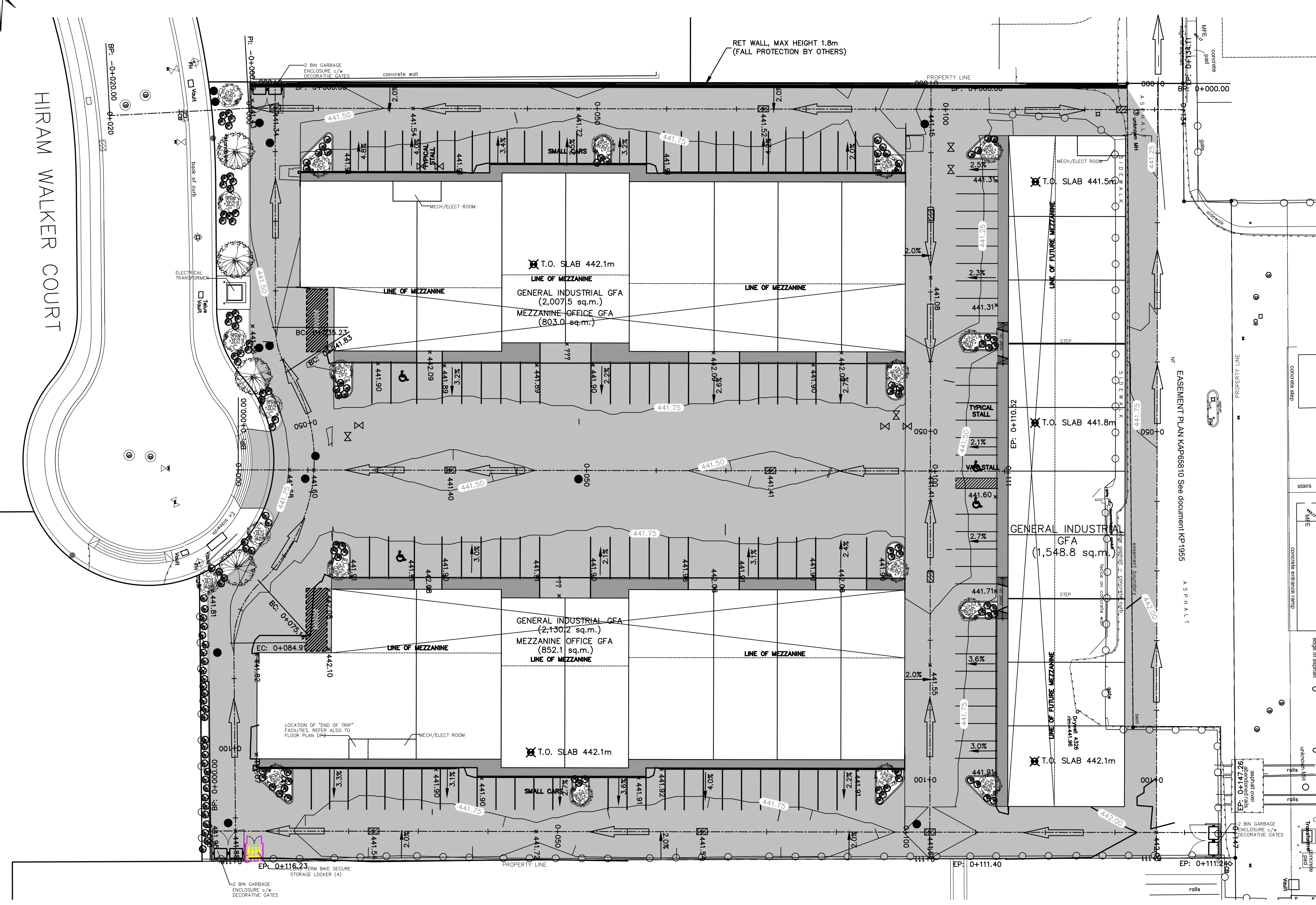
THE CITY OF KELOWNA
ENGINEERING DEPARTMENT
PROPOSED HEAVY INDUSTRIAL BUILDINGS
270 HIRAM WALKER COURT
SITE GRADING PLAN

DIVISION	DRAWING NO.	REV. NO.
	22089-P02	2

THE LOCATION, PLANS AND SPECIFICATIONS OF THE PROPOSED DEVELOPMENT ARE SHOWN ON THIS PLAN. THE USER OF THIS PLAN SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER OF THIS PLAN SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.



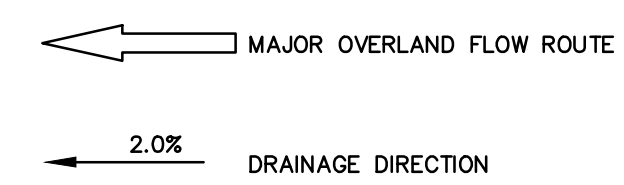
HIRAM WALKER COURT



PRELIMINARY

NOT FOR CONSTRUCTION

ISSUED FOR APPROVAL



LEGEND	
WATER	
SAN. SEWER	
STORM SEWER	
GAS	
U/G UTILITY (ALIGNMENT)	
EX. MANHOLE	
PROP. MANHOLE	
POWER POLE	
LAMP STANDARD	
CATCH BASIN	
HYDRANT	
SURVEY MONUMENT	
WATER CURB STOP	
SANITARY INSPECTION CHAMBER	
STORM INSPECTION CHAMBER	
TRANSFORMER - POWER	
SERVICE BOX	
OG CONTOURS (1m INTERVAL)	
FG CONTOURS (1m INTERVAL)	

PROTECH CONSULTING

300 - 3275 Lakeshore Rd Kelowna B.C. Phone 860-1771

PERMIT TO PRACTICE NO.: 1001403

NO.	DATE	BY	REVISION	CH'KD
2	2023-02-08	RSB	RE-ISSUED FOR DEVELOPMENT PERMIT	KCL
1	2022-12-22	RSB	ISSUED FOR DEVELOPMENT PERMIT	KCL

DRAWN	RSB
DESIGN	RSB
APPROVED	KCL
DATE	DEC 2022
SCALE	
HORIZ.	1:300
VERT.	N/A

THE CITY OF KELOWNA
ENGINEERING DEPARTMENT

PROPOSED HEAVY INDUSTRIAL BUILDINGS
270 HIRAM WALKER COURT
STORM WATER MANAGEMENT PLAN

DIVISION	
DRAWING NO.	REV. NO.
22089-P03	2

STORM DRAINAGE CALCULATIONS (MODIFIED RATIONAL METHOD)	
PRE DEVELOPMENT FLOW RATES	
5 year Event from File 18054 SWM	Q5yr= 0.008 m3/s

POST DEVELOPMENT FLOW RATES	
Q=0.0028CIA	
WHERE	Q=FLOWRATE C=WEIGHTED RUNOFF COEFFICIENT I=RAINFALL INTENSITY A=AREA
Assuming	247.3 m2 Landscaping C= 0.3 8700 m2 Asphalt C= 0.8 5852.7 m2 Building C= 0.9 14800 m2 Weighted C= 0.83

Area=	1.48 Ha	Tc	100 year Event	0.0028	C	I	A	
5		0.0028	0.83	172	1.48			0.592 m3/s
10		0.0028	0.83	98	1.48			0.338 m3/s
15		0.0028	0.83	71	1.48			0.245 m3/s
30		0.0028	0.83	41	1.48			0.141 m3/s
60		0.0028	0.83	25	1.48			0.086 m3/s

EXFILTRATION CALCULATIONS

Hydraulic Conductivity of the existing soil is equal to 5×10^{-4} m/s, and assuming a safety factor of one magnitude, design hydraulic Conductivity (K)= 0.0005 m/s

Area (A) is equal to the bottom effective area of the drywell barrel and the stone surround.
dry well barrel area (3.22m dia.) = 57.1 sq m for 7 drywells

The hydraulic gradient is equal to the head produced by the overflow
head (h) = 1.82 m

The exfiltration rate Q = AKi = 5.19 Lps
0.005 m3/s

Area (A) is equal to the wetted perimeter of the perforated pipe trench up the spring line of the pipe
wetted perimeter area = 698.6 sq m using 509m of 300 mm diameter

The hydraulic gradient is equal to the head produced by the pipe diameter and stone depth below the pipe
head (h) = 0.65 m

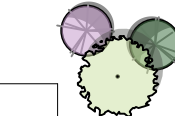
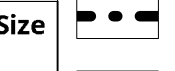
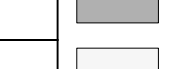
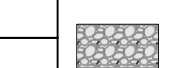
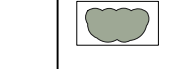

The exfiltration rate Q = AKi = 22.70 Lps
0.023 m3/s

STORAGE VOLUME REQUIRED = Q100(POST) - EXFILTRATION X DUR.					
Tc					
5	0.592	-	0.005	-	0.008
10	0.338	-	0.005	-	0.008
15	0.245	-	0.005	-	0.008
30	0.141	-	0.005	-	0.008
60	0.086	-	0.005	-	0.008

STORAGE VOLUME PROVIDED		
TOTAL IN	7 DRYWELLS AND SURROUNDING STONE	94.990 m3
TOTAL IN	401.5 m PIPE AND SURROUNDING STONE	117.238 m3
TOTAL ONSITE STORAGE	USING 300	212.228 m3

The City of Kelowna bylaw states for soil with a percolation rate of 0-15 minutes per 25mm, use 5 drywells per hectare. The soil with a hydraulic conductivity of 5×10^{-4} m/s is representative of a soil with a percolation rate of 0-15 minutes. Since our site area (hardscaped areas) is 14,800 sq. m or 1.48 ha a minimum of 8 drywell are required.

LEGEND:

-  PROPOSED TREES
-  PROPERTY LINE
-  ASPHALT (REFER CIVIL)
-  CONCRETE PAVING (REFER ARCHITECT)
-  DECORATIVE ROCK MULCH
-  SHRUB PLANTING

PLANT LIST					
QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	Mature Plant Size (Ht.xWd.)
Trees Deciduous					
5	<i>Acer rubrum</i> 'Bowhall'	Bowhall Red Maple	6cm Cal	B&B	15 x 4.5m
8	<i>Liquidambar styraciflua</i> 'Slender Silhouette'	Slender Silhouette Sweet Gum	6cm Cal	B&B	15 x 3m
3	<i>Quercus bicolor</i> 'Bonnie & Mike'	Beacon Swamp White Oak	6cm Cal	B&B	10 x 4.5m
6	<i>Syringa reticulata</i> 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	6cm Cal	B&B	6 x 4.5m
Shrubs					
14	<i>Achillea filipendulina</i> 'Gold Plate'	Gold Plate Yarrow	#01	Potted	1.2 x 0.9m
22	<i>Chrysothamnus nauseosus</i>	Common Rabbit Brush	#02	Potted	1.2 x 1.2m
17	<i>Helictotrichon sempervirens</i>	Blue Oat Grass	#01	Potted	1 x 0.9m
60	<i>Juniperus sabina</i> 'Monna'	Calgary Carpet Juniper	#02	Potted	0.3 x 2.1m
11	<i>Lavandula angustifolia</i> 'Munstead'	Munstead English Lavender	#01	Potted	0.6 x 0.9m
25	<i>Perovskia atriplicifolia</i> 'Longin'	Longin Russian Sage	#01	Potted	1.2 x 0.9m
60	<i>Rhus aromatica</i> 'Gro-Low'	Fragrant Sumac	#02	Potted	1 x 1.8m
9	<i>Yucca filamentosa</i> 'Golden Sword'	Golden Sword Yucca	#02	Potted	0.9 x 1.8m

NOTES:

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2. ALL PLANT MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE MINIMUM STANDARDS SET OUT IN THE CANADIAN LANDSCAPE STANDARD (CURRENT EDITION).
3. ALL PLANTING BEDS TO RECEIVE A MINIMUM DEPTH OF 50mm OF ROCK MULCH.
4. ALL LANDSCAPE AREAS ARE TO BE IRRIGATED WITH AN EFFICIENT AUTOMATIC IRRIGATION SYSTEM.
5. ALL PLANTING AREAS TO RECEIVE IMPORT TOPSOIL/GROWING MEDIUM AS FOLLOWS:
SHRUB AREAS: 300mm MIN. DEPTH
TREES: 1000mm MIN. DEPTH

PRECEDENT IMAGES:



TREE & LANDSCAPING PLANTING REQUIREMENTS:

INDUSTRIAL ZONES:
ONE TREE PER 30M2 OF LANDSCAPE AREA OR 1 TREE PER 10 LINEAR METRES OF LANDSCAPE AREA (WHICHEVER IS GREATER).

LANDSCAPE AREA* = 156M2
ONE TREE PER 30M2 OF LANDSCAPE AREA = 5 TREES

LINEAR METRES OF LANDSCAPE AREA* = 77 LM
ONE TREE PER 10 LM OF LANDSCAPE AREA = 8 TREES





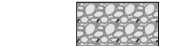

* LANDSCAPE AREA CALCULATED USING FRONT SETBACK DIMENSIONS ONLY. REAR SETBACK IS AN EASEMENT WITH A SHARED USE AGREEMENT.

MINIMUM RATIO BETWEEN TREE SIZE:
LARGE: MIN. 50% (4 TREES) = 5 TREES PROVIDED
MEDIUM: NO MIN. OR MAX RESTRICTIONS = 3 TREES PROVIDED
SMALL: MAX. 25% (2 TREES) = 0 TREES PROVIDED

SURFACE PARKING LOT:
A MIN. OF 1 TREE PER LANDSCAPED PARKING ISLAND.
14 TREES PROVIDED.



LEGEND:

-  PROPOSED TREES
-  PROPERTY LINE
-  ASPHALT (REFER CIVIL)
-  CONCRETE PAVING (REFER ARCHITECT)
-  DECORATIVE ROCK MULCH
-  SHRUB PLANTING

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1. THIS DRAWING DEPICTS FORM AND CHARACTER AND IS TO BE USED FOR DEVELOPMENT PERMIT SUBMISSION ONLY. IT IS NOT INTENDED FOR USE AS A CONSTRUCTION DOCUMENT.
2. ALL PLANT MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE MINIMUM STANDARDS SET OUT IN THE CANADIAN LANDSCAPE STANDARD (CURRENT EDITION).
3. ALL PLANTING BEDS TO RECEIVE A MINIMUM DEPTH OF 50mm OF ROCK MULCH.
4. ALL LANDSCAPE AREAS ARE TO BE IRRIGATED WITH AN EFFICIENT AUTOMATIC IRRIGATION SYSTEM.
5. ALL PLANTING AREAS TO RECEIVE IMPORT TOPSOIL/GROWING MEDIUM AS FOLLOWS:
SHRUB AREAS: 450mm MIN. DEPTH
TREES: 1000mm MIN. DEPTH

TREE & LANDSCAPING PLANTING REQUIREMENTS:

INDUSTRIAL ZONES:
ONE TREE PER 30M2 OF LANDSCAPE AREA
OR 1 TREE PER 10 LINEAR METRES OF LANDSCAPE AREA (WHICHEVER IS GREATER).

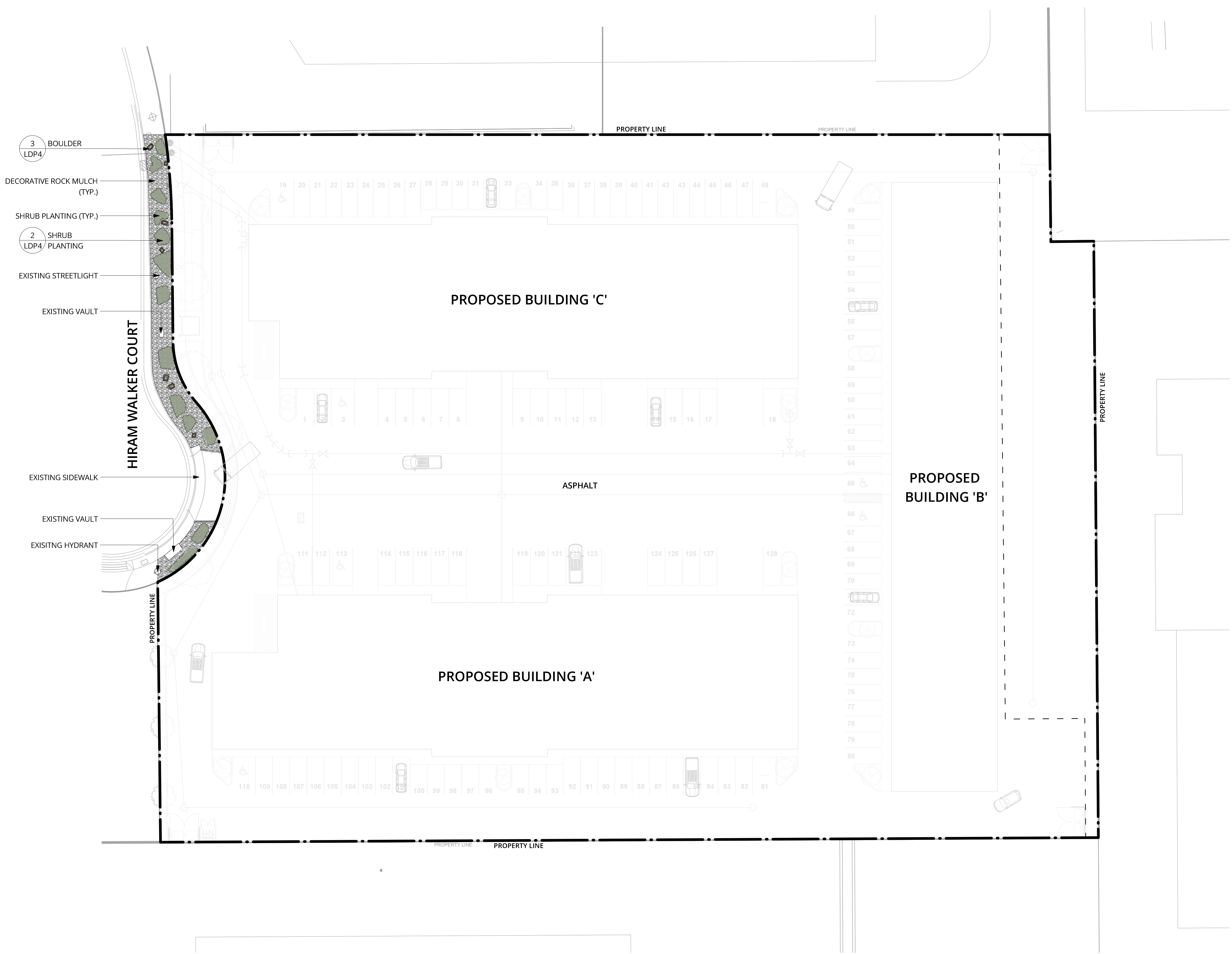
LANDSCAPE AREA* = 156M2
ONE TREE PER 30M2 OF LANDSCAPE AREA = 5 TREES

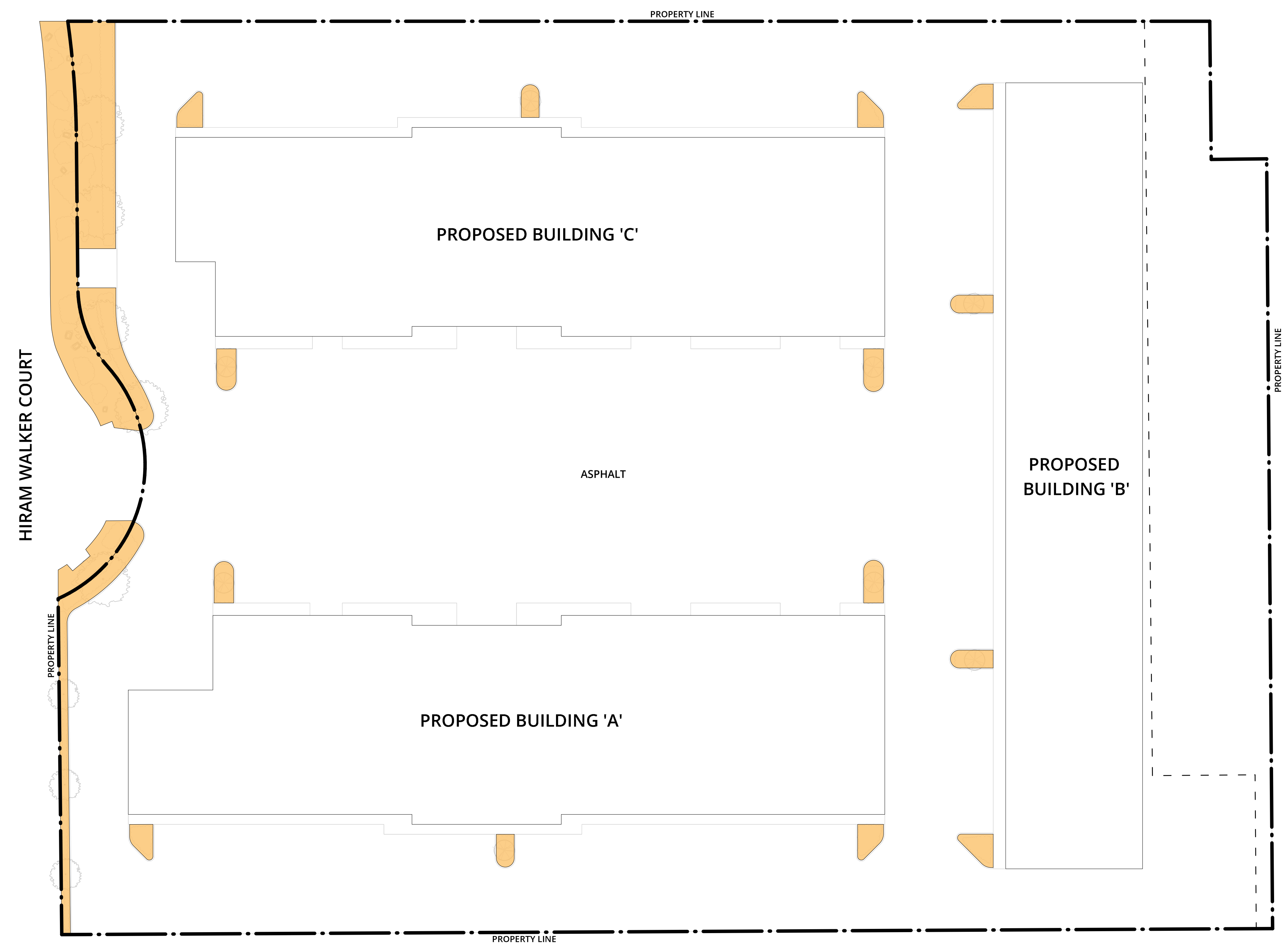
LINEAR METRES OF LANDSCAPE AREA* = 77 LM
ONE TREE PER 10 LM OF LANDSCAPE AREA = 8 TREES

* LANDSCAPE AREA CALCULATED USING FRONT SETBACK DIMENSIONS ONLY. REAR SETBACK IS AN EASEMENT WITH A SHARED USE AGREEMENT.

MINIMUM RATIO BETWEEN TREE SIZE:
LARGE: MIN. 50% (4 TREES) = 5 TREES PROVIDED
MEDIUM: NO MIN. OR MAX RESTRICTIONS = 3 TREES PROVIDED
SMALL: MAX. 25% (2 TREES) = 0 TREES PROVIDED

SURFACE PARKING LOT:
A MIN. OF 1 TREE PER LANDSCAPED PARKING ISLAND.
14 TREES PROVIDED.





ISSUED FOR :		
NO.	DESCRIPTION	DATE
0	ISSUED FOR DEVELOPMENT PERMIT	2023-01-03