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File:	Response to ACXX395: Kiwi Property Private Plan Change - Clause 23 Information Requests	Date:	March 23, 2020

Subject: Response to ACXX395: Drury Private Plan Change – Kiwi Property Clause 23 Information Requests

This memo documents the response to the ACXX395: Kiwi Property Private Plan Change - Clause 23 Information Requests (Transport), dated 3 March 2020.

The following attachments are referred to within this memo:

- Attachment 1: Response to ACXX395: Drury East Modelling Report Clause 23 Information Requests
- Attachment 2 : Revised Threshold (with direct access)
- Attachment 3 : Revised Threshold (without direct access)
- Attachment 4 : Revised Transport Modelling
- Attachment 5 : Response to the Kiwi Property PPC Clause 23 Information Request no. 26
- Attachment 6 : Drury East 2028 Modelling Report (Stantec, June 2019)
- Attachment 7 : Select Link Analysis Plots

RFI Number	Request	Response
TI	The transport modelling assessment and planning provisions currently speak to all three PPCs being accepted as a package and progressing in parallel. In the event that the PPCs are disaggregated, or deviate from each other in terms of timing as a result of the public notification process/resolution of critical elements, please provide further information as to how the transport effects of each individual PPC can be understood and mitigated and how the provisions may need to be amended as a result. Please confirm to what extent the PPC relies on the PPCs submitted by FHDL and Oyster Capital, and how the delay or rejection of one or both of these PPCs might affect the Kiwi Property PPC.	Refer to Section 1.2 of the Planning Response.
T2	Please confirm the "what", "how", "when" and "by whom" for the funding and delivery of all transport infrastructure and transport services required to support the PPC. This should include discussion about the staging, fit for purpose rail station facilitates, connections to the rail station for all modes, required bus services (including private services), and walking and cycling connections between each PPC area as development progresses. If there is no mechanism to deliver infrastructure that requires third party land,	Since lodgement of the Plan Change request the Government has confirmed the funding and bringing forward the delivery of many key transport infrastructure projects within the wider Drury – Opaheke area. Further traffic modelling has now been undertaken to take into account these timeframes. Discussions on the scope, funding, and timeframe of all transport infrastructure considered in the transport modelling assessment have been included in Attachment 4 (Revised Modelling) as well as the revised threshold tables for clarity (Attachment 2 and 3).



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	third party agreement or third-party funding, then the reasonableness of including the upgrade within the Precinct provisions should be discussed.	 The updated modelling now shows that there are only a limited number of local roading upgrades to enable certain development capacities: Interim safety upgrade to the Waihoehoe / Great South Road intersection to provide safe crossing facilities for pedestrians and cyclists on all approaches. Upgrade and signalisation to the Great
		South Road/Waihoehoe Road intersection to signals.
		Capacity upgrade of the Waihoehoe / Great South Road intersection.
		In addition, the Plan Change has also been amended to require the early delivery of cycle and pedestrian connections to the Drury Central train Station. These upgrades will be required prior to, or concurrently with the development.
		The funding and delivery of these required local upgrades will be addressed through a Developer Funding Agreement. It is expected that this will be finalised prior to a hearing on the Plan Change.
		It is expected that bus services in areas outside the walking catchment of the Drury Central train station will be provided by AT as demand arises consistent with their Auckland-wide policy for the provision of public transport services.
T3	The Precinct includes rules requiring the delivery of transport infrastructure based on a GFA/dwelling assessment and an external trip generation assessment. It is not clear how these rules will be monitored or how equitable outcomes between beneficiaries (i.e. landowners within the three PPC areas) will be ensured. Please comment on potential risks/challenges associated with monitoring the complex thresholds specified in Tables IX.6.2.1/2 and I/X6.3.1/2, and how these might be addressed.	Refer to Section 1.8.3 of the Planning Response.
Τ4	Please clarify whether Standard IX.6.2(1) requires the upgrades identified in Tables IX.6.2.1 and IX.6.2.2 when "any" or "all" development thresholds are exceeded. Similarly, clarify this for Standard IX.6.2(1.).	Refer to Section 1.8.3 of the Planning Response.
Τ5	Please comment on the feasibility of the proposed multiple upgrades to the Waihoehoe Road/Great South Road intersection, compared with implementing one or two upgrades to achieve the same end result. Consideration should be given to the disruption to the transport network and provision for all modes of transport.	The 'multiple' upgrades specified in the previous threshold tables (now superseded by the revised tables in Attachment 2 and 3) do not necessarily reflect the intention to carry out the upgrades in piece-meal manner, rather they represent the minimum that is required for each development stage from an operational perspective. In reality, the upgrades are indeed likely to be undertaken in one or two stages to achieve the same long term results, and in a manner which



		minimises disruption to the transport network.
		Refer to Attachment 2 and 3 for the revised timeframe for the upgrades to the Great South Road/ Waihoehoe Road roundabout, with and without the direct access (to Drury Interchange). This reflects the upgrade requirement from a capacity perspective. There will be continuous liaison with SGA and Auckland Transport to align the timing and form of this upgrade.
T6	Standard IX.6(2)(b) states that E27.6.1 Trip Generation does not apply to activities in Activity Table IX.4.1, however the Section 32 report does not comment on the rationale for this waiver. It is unclear why this waiver is necessary. Please clarify why an exemption from E27.6.1 Trip Generation is proposed in the Precinct plan.	 Within Standard E27.6.1(2), it is stated that Standard E27.6.1 does not apply where: "(b) development is being undertaken in accordance a consent or provisions approved on the basis of an Integrated Transport Assessment, where the land use and associated trip generation and transport effects are the same or similar in character, intensity and scale to those identified in the previous assessment;" "(d) there are requirements to assess transport, traffic or trip-generation effects for the activity in the applicable zone rules or precinct rules for any controlled or restricted discretionary activity land use." These rules mean that development in the precinct would not need to comply with the trip generation rule anyway given that an ITA has been prepared to inform the plan change and the specific transport provisions that it includes. The intent of the proposed exclusion is to make this clear. In our view, this is a clarification rather than a substantive issue for the Plan Change.
Τ7	Please confirm whether Precinct Plan 1 correctly refers to Waihoehoe Road as an existing arterial road.	The current status of Waihoehoe Road is primary collector. The Precinct Plan will be revised accordingly.
Τ8	Precinct Tables IX.6.2.1 and IX6.2.2 require multiple upgrades to the Waihoehoe Road/Great South Road intersection. By 2048 Waihoehoe Road is proposed to be 6 lanes wide, and Norrie Road is proposed to be 5 lanes wide. The SGA ITA identifies these roads as key public transport corridors, where bus priority measures (such as bus lanes) are likely. The form of this intersection proposed by the Precinct may not be compatible with provision for frequent bus services. Please confirm whether the proposed form of the Waihoehoe Road/Great South Road intersection is consistent with the design proposed by the SGA, particularly regarding bus priority, noting that the SGA	It is our understanding that the SGA is targeting NoR lodgement for the intersection of Great South Road / Waihoehoe Road in late 2020. While the exact SGA design is unknown at this stage, we acknowledge the potential for bus priority lanes along the approach corridors and at the intersection itself, and a narrower footprint overall. The results from the latest SATURN modelling confirm that widening (4-laning) of Great South Road and Waihoehoe Road is not required from a capacity perspective. Furthermore, the intersection modelling has confirmed that the revised form of the GSR / Waihoehoe Road intersection can accommodate full pedestrian crossings on all arms within a tightened footprint in the short - medium term, as traffic demand can be accommodated on short



	may be lodging a notice of requirement for this intersection.	lanes at the approaches (instead of requiring full widening of the corridor). Shorter lane lengths have been tested to maximise the opportunity to narrow the footprint, without severely impairing the level of services for all road users. Given the modelling results and the information available at this stage, we anticipate that at its full form, there will need to be 3 - 4 approach lanes on the Great South Road and Waihoehoe Road. It is noted that there is flexibility in the future to adapt this initial concept design to any change in traffic flows and patterns. There will be continuous liaison with SGA and Auckland Transport so that a mutually agreed concept design of the intersection can be achieved.
Т9	Please confirm what consideration has been given to Auckland Transport standards and guidelines when developing the road cross sections in IX.11 Drury Centre: Appendix 1, and explain how the Precinct will provide flexibility in design to ensure future roads are contextual to surrounding land uses and consistent with potential changes in Auckland Transport standards and guidelines.	The road cross sections have been developed based on the criteria listed in the SGA ITA for Drury area, with consideration and reference to the AT Roads and Street Framework (RASF) and Transport Design Manual (TDM), which at the time of the cross section development (2019) had only been issued as a 'soft launch'. The cross sections, together with the strategic placement and layout of the development, ensure that sufficient width will be available to enable a good level of walking and cycling facilities and movements appropriate for the intended development.
T10	Please confirm which transport infrastructure projects referenced in the ITA are funded within the RLTP/NLTP ("Funded"), unfunded with the RLTP/NLTP ("Committed") or not in the RLTP/NLTP ("Uncommitted"). Please confirm that the ITA includes all infrastructure assumed in the various modelling scenarios included in the Drury East Modelling Report.	The ITA has considered all infrastructure assumed in the various modelling scenarios. Refer to Attachment 4 for breakdown key infrastructure upgrades considered in the revised modelling, and their funding status.
TII	Please confirm whether the recommended transport improvements can be achieved within the existing legal road or by vesting private property owned by Kiwi Property, FHLD, or Oyster. If there is no mechanism to deliver infrastructure that requires third party land, third party agreement or third-party funding, then the reasonableness of including the upgrade should be discussed within the report.	The upgrades to Waihoehoe Road will be provided for through the NoR process led by AT / SGA, and that any third party land required will be acquired as part of that process. However, we note that the revised modelling illustrates that only safety upgrades will be required in the short term that will not require any land take. This will enable some development to proceed without the need for land take. The final upgrade to Waihoehoe Road / GSR intersection is likely to require third party land on the western side of GSR but this will not be required for some time. Again, it is anticipated that this will be addressed through the NoR process. We will continue to liaise with SGA and Auckland Transport to achieve alignment with the roading design.



 T12 The ITA has considered the Supporting Growth future transport network and states that the 2038 and 2048 modelling is "satisfactory" as all key infrastructure required to support the growth are anticipated to have been implemented. The ITA should consider the risks associated with Supporting Growth infrastructure implementation, noting that the Supporting Growth preferred network is yet to be consulted on, approved and secured. While some enabling projects may be "committed", they are not funded and as such the certainty or risk of these being on the ground by the intended date (particularly those in the short term) requires further discussion in the report. The "what", "how", "when" and "by whom" regarding the provision of this infrastructure and the connections should be clearly identified. Commentary on the feasibility and/or risks associated with these projects should also be included, for example the proposed improvements to the Great South Road/Waihoehoe Road intersection may require the acquisition of third-party land. T13 Please explain how the staged delivery of 	
T13 Please explain how the staged delivery of train and bus infrastructure and services, and walking and cycling infrastructure, aligns with the public transport mode share assumptions made in the Drury East Modelling Report. Please clearly identify any third party funding for infrastructure or services needed to support these assumptions.	the Drury Central train station and electrification of the Papakura to Pukekohe line with delivery prior to 2026. This provides certainty that Drury East will be



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T14	The ITA identifies the need to upgrade Waihoehoe Road and its intersection with Great South Road. This may require the upgrade of the Waihoehoe Road bridge over the rail line, which may need to be lifted in the process to meet Kiwi Rail vertical clearance requirements and require third party land on the western side. Please confirm whether the Waihoehoe rail overbridge will require replacement/upgrade to implement the transport infrastructure recommend in the ITA. If replacement/upgrade is required, please comment on whether potential alterations to the vertical alignment of the carriageway would affect safety outcomes (i.e. safe stopping distances for drivers) and how the upgrade of the bridge impacts on the level of development allowed for prior to its upgrade.	The SGA consultation plan for the corridor future upgrades includes the corridor urbanisation and widening to provide for a four-lane east-west connection between the Drury Centre and the proposed Opaheke north-south connection, to provide better public transport, walking and cycling facilities. This upgrade is supported as it will improve travel for all modes of traffic. Should this upgrade go ahead, this will require an upgrade to the rail overbridge which will be designed to ensure satisfactory vertical clearances and sightlines.
T15	Figure 2-1 of the ITA shows that a sizable portion of the PPC area is owned by third parties, including a large amount of road frontage with Waihoehoe Road and Fitzgerald Road. Please confirm whether the urbanisation of Fitzgerald Road and Waihoehoe Roads will be undertaken by Kiwi Property, or whether this is assumed to be undertaken by the landowner along each site frontage.	Waihoehoe Road is identified as a future arterial and is part of the DTIP programme. On this basis, it is expected that this project will be delivered by Auckland Transport, with input from the developers as required. The upgrade of existing Collector Roads will be progressively implemented as development occurs and will be subject to the development agreement referred to above.
T16	Drury Centre Precinct Plan 2 indicates that Brookfield Road will be extended to connect with Quarry Road, however access to the PPC via Quarry Road is only briefly discussed in Sections 7.3 and 8.2 of the ITA. Please comment on the timing of the connection between Brookfield Road and Quarry Road and discuss how this may affect the safety and efficiency of nearby intersections such as Quarry Road/Great South Road and SH22/Great South Road. Please also confirm whether this link was included within the PPC Saturn model.	The Brookfield/Quarry Road connection has been identified as an alternative connection to the direct access off the SH1 into Drury Centre. Direct access from SH! Into the Centre or the Brookfield/Quarry Road connection are not 'required' in a capacity- sense, but instead, desirable to provide good accessibility for the Drury Centre. The safety and efficiency impact to the nearby intersections, should the Brookfield/Quarry Road connection be provided, have not been specifically identified/assessed. This link was tested in SATURN to confirm its viability, however it has not been included in the final PPC SATURN model.
T17	Where connections to the south are proposed, further information is sought on what upgrades may be required to the southern network over and above those needed to support the Drury South development.	It is anticipated that the Drury South development will upgrade Quarry Road to form the 'Spine Road' for Drury South. This will include the upgraded intersection of Quarry Rd / Great South Road. Should the southern connection be provided, no further upgrades are anticipated at this stage other than the intersection with Quarry Road / Spine Road. The upgrade of existing roads that connect with Drury South will be progressively upgraded over time as development occurs, unless delivered earlier with Auckland Transport.



T10	Figure 7.1 of the ITA shows the provided	Defer to Section 1.2 of the Dispring Despense
T18	Figure 7-1 of the ITA shows the proposed transport network for the three PPCs. It would be helpful if this was shown as a land use and transport staging plan, coordinated between the three PPCs, and included the staging of roads, walking and cycling infrastructure. Please show the proposed staging for land use and how the proposed transport network, including walking and cycling infrastructure and streets suitable for buses, will be delivered in stages in an integrated way.	Refer to Section 1.3 of the Planning Response.
T19	Please provide further information on transport mitigation measures and appropriate thresholds for infrastructure improvements based on outcomes relevant to safety, public transport, and active modes. This should draw on the findings of the modelling report, but importantly consider the upgrades and improvements needed to achieve safety outcomes, and active mode and public transport uptake.	Refer to Attachment 2 and 3 for the revised thresholds including explanation on how safety and active modes have been considered, and Attachment 4 for the results of the revised modelling with a discussion on how PT and active modes provisions have been incorporated. Refer to the revised precinct provisions which now require pedestrian and cycle connections to the Drury Central train station to be staged with development. An interim upgrade to the roundabout to improve safety for all users is now required prior to any development despite the revised modelling identifying that a capacity upgrade is not required until at least 2033 (without direct access) and 2038 (with direct access). Considering that Waihoehoe and Norrie Rd widening (4-laning) may consist of one bus lane and one general lane each way (mentioned as a potential SGA design in the RFI), the modelling has shown that Great South Rd, Waihoehoe Road and Norrie Road can operate as a single lane corridors for general traffic. When extra turning lanes are needed, these are provided as short lanes with minimum lengths.
T20	Please confirm whether local road upgrades include provision for public transport and active modes infrastructure, and if so, explain how staged development within the three PPC areas will be interconnected to encourage a transit oriented development and achieve the mode share assumptions used in the Drury East Modelling Report.	The proposed staging of access provisions between the train station and plan change areas is included within the revised precinct provisions (refer to Section 1.3 of the Planning response). Some PT and active modes upgrades to local roads within the plan change (Great South Road, Waihoehoe Road, Norrie Road) are already earmarked by SGA and any upgrade proposed by the Plan Change will not preclude these outcomes. The Plan Change requires the design of roads within the Plan Change area to be designed in accordance with the road cross sections. Local roads are required to provide pedestrian paths. Local Roads – Park Edge are also required to provide cycle paths.



T21	Please clarify what assumptions were included in the transport model regarding enabling rail as a transport option before the delivery of a fully functional rail station. Please, provide commentary on whether these mode share assumptions are likely to align with the user perception of a "temporary" rail station.	The Government has now confirmed the funding of the Drury Central train station and the delivery of the fully functional station in 2024. Therefore, this is included as an assumption in the revised transport model. Furthermore, the revised precinct provisions now require pedestrian and cycle connections to the Drury Central train station to be staged with development to support and optimise the uptake of PT. Sensitivity tests have been undertaken on the 2026 network using the existing (2016) mode shares for PT, to consider the possibility of late delivery of the Drury Central train station. The results (flows and delays) are very similar to the 2026 network with the train station in place, with only very small delay on the interchange and he existing roundabout. Therefore, should the Drury Central train station not be fully operational by 2026, or in the worst-case scenario, has not been implemented, we do not expect this to significantly affect our first decade traffic modelling reverted.
TOO	The Master Plan indicates that the frequent	results.
T22	The Master Plan indicates that the frequent transit network (FTN) bus network will include an interchange with the train station, located to the south of Great South Road. This is contrary to the routing assumed in the SGA ITA, which anticipates the FTN using Bremner Road and Waihoehoe Road. Please provide further analysis of the frequent transit network service pattern regarding access to the bus interchange with the train station. This should include a comparison of expected total bus service hours between the proposed train station location vs. the preferred location identified in the SGA ITA.	We understand that Auckland Transport's preferred location of the train station has been moved to a point midway between the northern Waihoehoe Road option and the Kiwi Property preferred location on Watercare land. The proximity of the two possible locations which will mean similar FTN network and routing. It is also noted that the FTN network shown in the ITA of the PCs is only an indicative illustration of how the FTN network as identified by SGA could be expanded to cater for development in Drury East. It is anticipated that the location of train station would not make a significant difference in overall bus service hours.
T23	There is potential for additional catchment for the train station from the Auranga development. High quality walking and cycling facilities have been constructed on Bremner Road, these could be extended onto Firth Street and over Great South Road to provide a ready connection to the train station. This may support earlier delivery of the train station and/or train services. Please confirm whether the potential catchment for the train station from the nearby Auranga development been considered, and if so, whether provision of a quality walking and cycling connection would increase overall public transport mode share and reduce congestion at key constraint points on the network.	Refer to Section 1.4.1 of the Planning Response. The live-zoned land within Auranga will be in closer walking distance to a station on the Watercare site than it will be to the Drury West station. Auranga residents will be able to access the Drury Central train station by Bremner Road and Flanagan Road by walking or cycling. The new Bremner Road bridge is already in place, with provisions to be made for separated cycling route along Waihoehoe Road. An alternative potential access would be a pedestrian footbridge connection so that residents would be able to walk/cycle down Firth Street and cross directly to the station, which could be delivered by Auckland Transport in the future.



Τ24	The PPC area is adjacent to the Drury South Industrial Precinct. This Precinct includes requirements for improvements to the transport network surrounding the PPC area. The Precinct Plan includes the provision of walking and cycling facilitates, which may enable a connection between the Drury South Industrial Precinct and the PPC. Please comment on how the transport improvements to support the Drury South Industrial Precinct may interact with the improvements needed to support the PPC.	 The following transport improvements have been specified in the Drury South Industrial Precinct Plan (I410), that are relevant to the Plan Change. The realignment of existing Quarry Rd onto the alignment of the Spine Road The upgrading of existing Quarry Road/Great South Road intersection The provision of traffic signals or alternative upgrade to the Great South Road / SH22 The upgrading of the right turn bay on Waihoehoe Road at the Waihoehoe Road / Fitzgerald Road intersection, under the scenario where development of the Precinct proceeds in advance of the Mill Road Corridor Project. a new dedicated pedestrian path and cycleway has been constructed between the existing Drury township and the Drury South Industrial Precinct Plan 2 identifies this connection to be via Waihoehoe Road and Fitzgerald Road)
		All of the above measures appear compatible with the upgrades identified in the Plan Change. As per the response for request 17, should a southern connection from the metropolitan centre be provided, no further upgrades are anticipated at this stage other than the intersection with Quarry Road / Spine Road. Any other upgrade of the existing roads that connect with Drury South will be progressively upgraded over time as development occurs (unless delivered earlier in collaboration with AT). The provision of new walking and cycling facilities
		included in the Plan Change (as shown in the Plan Change ITA Section 7.5) is compatible with the walking and cycling connection shown on the Precinct Plan 2 of 1410.10.2 Drury South Industrial.



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T25	Please provide further information on the proposed train station location by comparing this with the location preferred by the Supporting Growth Alliance. to the report should consider the following - developable land area with walking catchment (noting that Council's Structure Plan land-uses are not fixed and can be assumed to be responsive to the location of the station) - operational considerations including accessibility for FTN and local buses, walking, - cycling, kiss and ride, and park and ride - potential park and ride size - future proofing for four rail tracks - station spacing (relative to the proposed rail station at Drury West) - technical rail and engineering specifications) - commentary on whether the objectives used to assess the train station location in the Master Plan align with the objectives used by Council and SGA for the Drury	Refer to Section 1.4.1 of the Planning Response.
T26	Structure Plan The ITA leverages off the assessment and conclusions of the SGA ITA. Table 8-1 of the SGA ITA identifies the "next steps" that need to be undertaken for any Plan Change (either initiated by Council or by private landowners). Please comment on how the ITA addresses each of the following topics. Please comment on how the ITA responds to the recommended "next steps" identified in Table 8-1 of the SGA ITA. The report should consider the following o Land-use changes o Further consideration of local employment to manage travel demand o Future Plan Change guidance o Collection road funding and implementation risks o Further assessment and design development of network "hot spots" o Integration with operative Precincts o Further development of staging strategies o General design detail o Further development of the secondary active mode network and greenways o Further development of rail station access and park and ride strategy	Refer to Attachment 5 - Kiwi RFI T26 Response.



T27	Section 6.1 of the ITA provides indicative staging for the development. The report should include information on the assumed land uses within each stage and indicative development years. For example, the number of dwellings, commercial and retail GFA, and anticipated job numbers. Please update the ITA to include information on the assumed land uses within each stage and indicative development years.	Noted, this will be incorporated in the revised ITA.
T28	Sections 6.2.1 and 7.4 of the ITA discuss the provision of parking at "an appropriate rate", and that a "shared parking strategy" will be provided in the Metropolitan Centre. Section 7.2 states that "abundant" parking will be provided in the early stages of development. The Master Plan estimates that 12,800 parking spaces are required for the PPC and provides some discussion of the approach to a "shared parking strategy". However, the proposed Precinct provisions remain silent on the matter of parking. Please confirm the amount of car parking that is intended to be provided within the Metropolitan Centre, clarify how this intention will be carried through to implementation (e.g. Precinct provisions), and comment on how this will affect the intention of the Metropolitan Centre to become a transit oriented development.	The approach to the provision of car parking is to rely on the Auckland-wide provisions. This is because the car parking requirements for the Metropolitan Centre zone have been set at rates which reflect the anticipated demand generated by an activity within large scale centres, which for the most part operate as transit-orientated developments (e.g. Newmarket). This approach will ensure the provision of carparking will be consistent with the levels provided in other Metropolitan Centres and therefore the parking supply will be commensurate with the character, scale and intensity expected in Metropolitan Centre zones. Providing a supply of carparking that is consistent with the anticipated demand for a Metropolitan Centre will enable greater transport choice to allow people to access Drury Centre by car where they are not in close proximity to public transport.
T29	Please provide a consolidated table showing development thresholds for infrastructure upgrades, which includes vehicle trip generation and assumed number of public transport trips.	Noted. Refer to Attachment 2 and 3 for the revised and consolidated threshold tables.
Т30	Section 2.2 of the ITA includes the following sentence "The FULSS investigates future transport infrastructure improvements required to enable the land use development envisaged in the FULSS". We suggest that the first reference to the FULSS should be amended to "SGA".	Noted, this will be incorporated in the revised ITA.

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